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**Marathon Petroleum Company LP**

1300 South Fort Street  
Detroit, MI 48217  
Telephone 313/843-9100

**FEDERAL EXPRESS**

January 20, 2012

Mr. Chris Ethridge  
MDEQ – Air Quality Division  
Cadillac Place  
3058 West Grand Boulevard  
Suite 2-300  
Detroit, MI 48202

**RE: Fourth Quarter 2011 Leak Detection and Repair, Wastewater VOC, and  
Benzene Waste NESHAP Certification and Compliance Report**

Dear Mr. Ethridge:

This report is being submitted by the Michigan Refining Division of Marathon Petroleum Company LP (MPC) to fulfill the requirements of:

- The fugitive and wastewater VOC emissions monitoring program for the fourth quarter of 2011. This report is required by Michigan Air Rule 622, U.S. EPA's New Source Performance Standards (NSPS), and the National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. In addition, this report contains information required by Paragraph 200iic of the First Modification to the November 2005 First Revised Consent Decree (CD), United States of America et. al. v. Marathon Petroleum Company LP (MPC) (Civil Action No. 4:01CV-40119-PVG), lodged February 7, 2008 and entered on March 31, 2008.
- The Benzene Waste NESHAPS Subpart FF Certification and Compliance report for the fourth quarter of 2011. This report is required by 40 CFR 61 Subpart FF and Paragraph 18.P.ii.b of the Consent Decree.

The attached tables include information necessary for compliance with these requirements.

Table 1 lists MPC process units (NSPS VV Section 60.487 (c)(1)) and summarizes the process unit shutdowns that occurred during this quarter (NSPS VV Section 60.487 (c)(3)). Table 1 also includes the approximate number of components present in each unit at the beginning and ending of the reporting period (NSPS VV Section 60.487(c)(4)).

Table 2 lists the components found leaking and an exceedance summary for various pieces of control equipment or treatment processes during this quarter and the dates of repair (NSPS VV Section 60.487(c)(2) and 40 CFR 61.357(d)(7)).

Table 3 lists leaking components on delay of repair (NSPS VV Section 60.487(c)(2)). This information is also required by Paragraph 20.O.ii.c.2.f of the CD.

Table 4 includes information satisfying NSPS Subpart QQQ (Section 60.698(c)) requirements.

This table summarizes drain and junction box inspections that identified seals with low water level or other problems that could result in VOC emissions. In addition, subsequent corrective actions and/or repairs are identified. All required inspections for the QQQ standards have been completed as required.

Table 5 presents measures that MPC took to satisfy Paragraphs 20.O.ii.c.1 and 18.P.ii.b of the CD.

Table 6 lists specific monitoring information as required per Paragraph 20.O.ii.c.2.a–e of the CD.

Table 7 contains the certification that all of the required inspections have been carried out in accordance with the requirements of 40 CFR 61.357(d)(6).

Table 8 contains the exceedance summary for various pieces of control equipment or treatment processes as required in 40 CFR 61.357(d)(7) and 40 CFR 60.692-5(e)(5).

Table 9 contains the End of Line calculation as required per Paragraph 18.K.iii and 18.P.ii.b of the CD. The refinery received written approval of the End of Line Sampling Plan on March 8, 2010.

Table 10 includes information satisfying Benzene Waste NESHAP Subpart FF (Section 61.357(d)(8)) requirements.

This table summarizes all inspections required by 40 CFR 61.342 through 61.354 during which detectable emissions are measured or a problem that could result in benzene emissions is identified. Additionally, subsequent corrective actions and/or repairs are identified.

Please contact Ms. Kristen Schnipke (313) 297-4750 or Mr. Greg Shay (313) 297-6115 if you have any questions concerning this submittal.

Mr. Ethridge  
January 20, 2012  
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Sincerely,

Marathon Petroleum Company LP

By: MPC Investment LLC, General Partner

A handwritten signature in black ink, appearing to read "C.T. Case". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

Mr. C.T. Case, Deputy Assistant Secretary

Attachments

cc: (2) U.S. EPA, Director of Regulatory Enforcement c/o Matrix Environmental and  
Geotechnical – *Federal Express*  
(2) Air and Radiation Division, U.S. EPA Region 5 – *Federal Express*  
(2) Office of Regional Counsel, U.S. EPA Region 5 – *Federal Express*

**Table 1**  
**Component Summary - Fourth Quarter 2011**  
**Michigan Refining Division**

Complex	Unit	Description	Approximate Number of Components						Dates of Shutdown
			Pumps		Valves		Compressors		
			9/30/2011	12/31/2011	9/30/2011	12/31/2011	9/30/2011	12/31/2011	
1	4	Vacuum Unit	5	5	459	495	2	2	
	5	Crude Unit	31	32	2,136	2,307	0	0	
	29	Wastewater Plant	17	16	729	729	0	0	
2	7	Distillate Hydrotreater Unit	20	20	1,300	1,310	3	3	
	8	Gas Oil Hydrotreater Unit	5	5	1,580	1,562	2	2	
	9	Alkylation Unit	29	29	2,060	2,063	1	1	
3	11	Fluid Catalytic Cracking Unit	6	6	476	483	0	0	
	13	Propylene Unit	9	9	692	699	3	3	
	12 21	Gas Con/SATS Depropanizer/Treaters	27	27	1,959	1,982	2	2	
4	14	Continuous Catalytic Reformer Unit	14	14	2,071	2,071	2	2	
	16	Naphtha Hydrotreater Unit	25	23	1,743	1,743	0	0	
	19	Kerosene Hydrotreater Unit	8	8	671	685	1	1	
5	1	Crude Tank Farm	23	24	829	833	0	0	
	2	LPG Tank Farm	20	20	2,152	2,155	0	0	
	3/4	CP/Melvindale Tank Farms	25	26	1,575	1,511	0	0	
		Light Products Terminal	18	15	888	888	0	0	



**Table 2**  
**Leakers Detected During Fourth Quarter 2011**  
**Michigan Refining Division**

Month	Complex	Unit	VOC Tag I.D.	Component Type	Date Leak Detected	Date of Repair*
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SEE ATTACHED TABLE

\*R/D = Repair Delay    S/D = Shutdown Required



MARATHON - DETROIT  
1300 SOUTH FORT STREET  
DETROIT, MI 48217

01/17/2012

## LEAKING EQUIPMENT LOG

Program: NSPS-VV

Reporting Period 10/01/2011 - 12/31/2011

### Process Unit : 01

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
1600	VALVE/ WTR DRW	6.00	W SIDE OF TK40 WATER DRAW	10/06/2011	VIS	F	RUSTED BOL	10/06/2011	ATTB	0.00	
				10/20/2011	VIS	P		10/20/2011	RWD	3.00	
				10/20/2011	M21	3 PPM		10/20/2011	VLV-CAP		10/20/2011
1649	PUMP	0.00	22P170 SE OF SAND FILTERS	11/01/2011	VIS	F	PMP-FLG	11/01/2011	PMP-WS E	752.00	
				11/02/2011	M21	752 PPM					
				11/09/2011	VIS	P					11/09/2011

#### Process Unit 01 Summary

	Component Count	Leak Count
Total in Group	2	2
Total Valves	1	1
Total Pumps	1	1
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2324	VALVE/ CTRL	4.00	DOT LINE S SIDE OF TK98 40FT N OF TORONTO RDWY. CV MOV 16A.	10/18/2011	M21	160800 PPM	VLV-PKG	10/18/2011	VLV-CL	46200.00	
				10/18/2011	M21	46200 PPM		10/28/2011	VLV-TP	201.00	
				10/28/2011	M21	201 PPM					10/28/2011
2366	VALVE/ BALL	3.00	15FT SW OF TK98 @UG-5-009 DOT LINE	10/18/2011	M21	29300 PPM	VLV-BON	10/28/2011	VLV-TBO N	152.00	
				10/28/2011	M21	152 PPM					10/28/2011
2366	VALVE/ BALL	3.00	15FT SW OF TK98 @UG-5-009 DOT LINE	12/16/2011	M21	13100 PPM	VLV-BON	12/16/2011	VLV-CL	10400.00	
				12/16/2011	M21	10400 PPM		12/22/2011	VLV-TP	19.00	
				12/22/2011	M21	19 PPM					12/22/2011
3195	VALVE/ ORBIT	3.00	SSD TOP OF BULLET TK 94 VLV RIGHT 7FT E OF TK 93	12/02/2011	M21	51700 PPM	VLV-PKG	12/02/2011	VLV-CL	38000.00	
				12/02/2011	M21	38000 PPM		12/07/2011	VLV-INJ	10.00	
				12/07/2011	M21	10 PPM					12/07/2011
3221	VALVE/ ORBIT	3.00	SSD OF BULLET TK 93 ON TOP 7FT E OF TK 92	12/06/2011	M21	16700 PPM	VLV-PKG	12/06/2011	VLV-CL	14900.00	
				12/06/2011	M21	14900 PPM		12/07/2011	VLV-TP	72.00	
				12/07/2011	M21	72 PPM					12/07/2011
3835	VALVE/ NEEDLE	0.25	10' N OF PUMP 22P88 @ SAMPLE STATION	12/02/2011	M21	47700 PPM	VLV-PKG	12/02/2011	VLV-CL	69200.00	
				12/02/2011	M21	69200 PPM		12/06/2011	VLV-TP	2.00	
				12/06/2011	M21	2 PPM					12/06/2011
3840	PUMP	0.00	PUMP 22P89 S OF TK87	10/18/2011	VIS	F	PMP-SCR	10/18/2011	PMP-ST	78000.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
3840	PUMP	0.00	PUMP 22P89 S OF TK87								
									M		
				10/18/2011	M21	78000 PPM					
				10/18/2011	M21	148400 PPM		10/20/2011	PMP-WS E	0.00	
				10/20/2011	VIS	F					
				10/20/2011	M21	10000 PPM		10/25/2011	PMP-TFI	0.00	
				10/25/2011	VIS	F		10/31/2011	PMP-TFI	0.00	
				10/31/2011	VIS	P					
3840	PUMP	0.00	PUMP 22P89 S OF TK87	10/31/2011	M21	411 PPM					10/31/2011
				11/09/2011	VIS	F	PMP-SCR	11/09/2011	PMP-TFI	0.00	
				11/16/2011	VIS	F		11/16/2011	PMP-TFI	0.00	
				11/22/2011	VIS	P					
				11/28/2011	VIS	P		11/30/2011	PMP-SEJ	0.00	
				11/30/2011	VIS	P					
				11/30/2011	M21	207 PPM					11/30/2011
3840	PUMP	0.00	PUMP 22P89 S OF TK87	12/02/2011	M21	13400 PPM	PMP-SEAL	12/02/2011	PMP-WS E	12000.00	
				12/02/2011	M21	12000 PPM		12/05/2011	PMP-TFI	0.00	
				12/05/2011	VIS	F		12/06/2011	PMP-WS E	10000.00	
				12/06/2011	M21	10000 PPM		12/14/2011	PMP-TFI	0.00	
				12/14/2011	VIS	F		12/14/2011	PMP-SEJ	0.00	
				12/14/2011	VIS	P					
				12/14/2011	M21	71 PPM					12/14/2011
3840	PUMP	0.00	PUMP 22P89 S OF TK87	12/28/2011	VIS	F	PMP-SCR	12/28/2011	PMP-TFI	0.00	
				01/03/2012	VIS	F		01/03/2012	PMP-TFI	0.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
3918	VALVE	1.00	SE SDE OF TK87 @ CEMENT COLUMN	01/10/2012	VIS	F		01/10/2012	PMP-TFI	0.00	
				01/11/2012	VIS	P		01/11/2012	PMP-TFI	40.00	
				01/11/2012	M21	40 PPM					01/11/2012
				*** Placed on Delay for Turnaround on 12/16/2011							
				12/02/2011	M21	31800 PPM	VLV-BON	12/02/2011	VLV-CL	276300.00	
3940	VALVE/ CHAIN	4.00	14' S OF 22P89 OVHD IN PIPERACK	12/02/2011	M21	276300 PPM		12/06/2011	VLV-CL	20000.00	
				12/06/2011	M21	20000 PPM					
				10/18/2011	M21	11700 PPM	VLV-PKG	10/20/2011	VLV-TP	59.00	
3976	PUMP	0.00	PUMP 22P86 12' W OF TK80	10/20/2011	M21	59 PPM					10/20/2011
				10/18/2011	VIS	F	PMP-SCR	10/18/2011	PMP-ST M	18900.00	
3977	VALVE/ ORBIT	4.00	PUMP 22P86 SUCTION LINE 12' W OF TK80	10/18/2011	M21	18900 PPM					
				10/18/2011	M21	19600 PPM		10/20/2011	PMP-TFI	0.00	
				10/20/2011	VIS	F					
				10/20/2011	M21	10000 PPM					
				10/25/2011	VIS	P		10/31/2011	PMP-TFI	273.00	
				10/31/2011	M21	273 PPM					10/31/2011
				12/06/2011	M21	19500 PPM	VLV-PKG	12/06/2011	VLV-CL	12900.00	
4061	VALVE/ ORBIT	6.00	S SIDE TK83 TOP BLK	12/06/2011	M21	12900 PPM		12/08/2011	VLV-TP	39.00	
				12/08/2011	M21	39 PPM					12/08/2011
4061	VALVE/ ORBIT	6.00	S SIDE TK83 TOP BLK	12/06/2011	M21	10100 PPM	VLV-PKG	12/06/2011	VLV-CP	160600.00	
				12/06/2011	M21	160600 PPM		12/08/2011	VLV-TP	4.00	
				12/08/2011	M21	4 PPM					12/08/2011

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
4213	VALVE/ BALL CHECK	0.75	TK 83 S SIDE BTM BLK	10/18/2011	M21	12000 PPM	VLV-PLUG	10/18/2011	VLV-CL	16100.00	
				10/18/2011	M21	16100 PPM		10/20/2011	VLV-TPL G	43.00	
				10/20/2011	M21	43 PPM					10/20/2011
4221	VALVE/ ORBIT	6.00	TK 83 S SIDE BTM BLK UNDERNEATH	12/06/2011	M21	18800 PPM	VLV-PKG	12/06/2011	VLV-CL	84100.00	
				12/06/2011	M21	84100 PPM		12/08/2011	VLV-TP	27.00	
				12/08/2011	M21	27 PPM					12/08/2011
4246	VALVE/ QUICK	0.75	TK 82 S SIDE BTM DRAIN BLDR	12/06/2011	M21	92400 PPM	VLV-PKG	12/06/2011	VLV-CL	118700.00	
				12/06/2011	M21	118700 PPM		12/08/2011	VLV-TP	5.00	
				12/08/2011	M21	5 PPM					12/08/2011
4290	VALVE/ GATE	0.50	TK 80 S SIDE OVHD BLDR	11/28/2011	VIS	F	VLV-PLUG	11/28/2011	VLV-TPL G	0.00	
				11/28/2011	VIS	F		12/07/2011	VLV-PLU	0.00	
				12/07/2011	VIS	P					
				12/07/2011	M21	0.59 PPM					12/07/2011
4311A	VALVE/ CHECK	0.75	10FT W OF TK 80 S SIDE BTM BLDR	10/18/2011	M21	115000 PPM	VLV-SCR	10/18/2011	VLV-CL	34500.00	
				10/18/2011	M21	34500 PPM		10/18/2011	VLV-TCO N	97.80	
				10/18/2011	M21	97.8 PPM					10/18/2011
4403	VALVE/ CTRL	3.00	RK 3 WEST ISLAND CV@PMP	12/07/2011	M21	29900 PPM	VLV-PKG	12/07/2011	VLV-CP	17400.00	
				12/07/2011	M21	17400 PPM		12/09/2011	TBL	2900.00	
				12/09/2011	M21	2900 PPM					12/09/2011

**Process Unit : 02**

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
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**Process Unit 02 Summary**

	Component Count	Leak Count
Total in Group	17	21
Total Valves	15	16
Total Pumps	2	5
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0



MARATHON - DETROIT  
1300 SOUTH FORT STREET  
DETROIT, MI 48217

01/17/2012

## LEAKING EQUIPMENT LOG

Program: NSPS-GGGA

Reporting Period 10/01/2011 - 12/31/2011

### Process Unit : 04

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
32376	VALVE/ INSTR	0.50	4C4B NE INST VLV TO PI TO CITY WATER LINE OFF OF SEAL DRUM VAPORS LINE								
				12/03/2011	M21	2899 PPM	VLV-SCR	12/03/2011	VLV-CL	1076.00	
				12/03/2011	M21	1076 PPM		12/07/2011	VLV-CL	7.00	
				12/07/2011	M21	7 PPM					12/07/2011

#### Process Unit 04 Summary

	Component Count	Leak Count
Total in Group	1	1
Total Valves	1	1
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0



Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 05

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
1-00542	VALVE/ CTRL	4.00	LVL 1 5V4 FRACT OH RCVR NE CRNR @ CNTRL LP 5PC0255								
				12/09/2011	M21	10500 PPM	VLV-PKG	12/09/2011	VLV-CL	12400.00	
				12/09/2011	M21	12400 PPM					
				12/21/2011	M21	1 PPM					12/21/2011
27460	VALVE/ CTRL	3.00	LVL 1 STRUCT 5V4 FRACT OH RCVR NE CRNR @ CNTRL LP FUEL GAS 5PC0255								
				12/09/2011	M21	19400 PPM	VLV-PKG	12/09/2011	VLV-CL	17200.00	
				12/09/2011	M21	17200 PPM		12/16/2011	VLV-TP	3.00	
				12/16/2011	M21	3 PPM					12/16/2011
29025	PUMP	0.75	BOTTOM 5V35 & 5V32 DESALTERS CHEM TOTES TK 5T6 PMP								
				11/02/2011	VIS	F	PMP-TUB	11/02/2011	PMP-TFI	0.00	
				11/10/2011	VIS	P					
				11/16/2011	VIS	P					
				11/16/2011	M21	3.18 PPM					11/16/2011

## Process Unit 05 Summary

	Component Count	Leak Count
Total in Group	3	3
Total Valves	2	2
Total Pumps	1	1
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 07

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2-01144	PUMP	0.00	7P28 UNDER 7V58 SOUTH SIDE	11/28/2011	VIS	F	PMP-SEAL	12/01/2011	PMP-WS E	0.00	
				12/01/2011	VIS	F		12/07/2011	PMP-WS E	0.00	
				12/07/2011	VIS	F					
				12/08/2011	M21	3.58 PPM					
				12/08/2011	VIS	P					12/08/2011
2-01144	PUMP	0.00	7P28 UNDER 7V58 SOUTH SIDE	12/14/2011	VIS	F	PMP-SEAL	12/14/2011	PMP-WS E	0.00	
				12/20/2011	VIS	P		12/22/2011	PMP-WS E	0.00	
				12/22/2011	VIS	P					
				12/22/2011	M21	309 PPM					12/22/2011
2-01144	PUMP	0.00	7P28 UNDER 7V58 SOUTH SIDE	12/28/2011	VIS	F	PMP-SEAL	12/28/2011	PMP-WS E	0.00	
				01/04/2012	VIS	F		01/04/2012	PMP-WS E	0.00	
				01/11/2012	VIS	F		01/11/2012	PMP-WS E	75.00	
				01/11/2012	M21	75 PPM		01/11/2012	PMP-SEJ	0.00	
				01/11/2012	VIS	P					01/11/2012
25830	VALVE/ NEEDLE	0.50	L1/4 7-V-108 20' N. D.P. CELL	12/08/2011	M21	22600 PPM	VLV-PKG	12/08/2011	VLV-CL	12700.00	
				12/08/2011	M21	12700 PPM		12/13/2011	VLV-TFIT T	303.00	
				12/13/2011	M21	303 PPM					12/13/2011

**Process Unit : 07**

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
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**Process Unit 07 Summary**

	Component Count	Leak Count
Total in Group	2	4
Total Valves	1	1
Total Pumps	1	3
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
09C1	COMPRESSOR/ CENTRIFUGE	0.00	9C1 ALKY COMPRESSOR	*** Placed on Delay for Turnaround on 11/23/2009							
				11/12/2009	M21	11300 PPM	COM-CSE AL	11/17/2009	CMP-WO	15000.00	
				11/17/2009	M21	15000 PPM					
				12/29/2009	M21	4964 PPM					
				01/14/2010	M21	11245 PPM		01/14/2010	VLV-SEJ	9911.00	
				01/14/2010	M21	9911 PPM					
				02/03/2010	M21	10253 PPM		02/03/2010	VLV-SEJ	9856.00	
				02/03/2010	M21	9856 PPM					
				03/23/2010	M21	1563 PPM					
				04/30/2010	M21	155 PPM					
				05/23/2010	M21	331 PPM		06/30/2010	CMP-WO	1601.00	
				06/30/2010	M21	1601 PPM					
				07/15/2010	M21	178 PPM					
				08/24/2010	M21	53.8 PPM					
				09/29/2010	M21	164 PPM					
				10/06/2010	M21	208 PPM		11/30/2010	CMP-WO	2313.00	
				11/30/2010	M21	2313 PPM					
				11/30/2010	M21	3411 PPM		01/14/2011	CMP-WO	2404.00	
				01/14/2011	M21	2404 PPM					
				01/14/2011	M21	29.88 PPM					
				02/17/2011	M21	140 PPM					
				04/26/2011	M21	20.18 PPM					
				05/04/2011	M21	1748 PPM					
				06/20/2011	M21	1291 PPM					
				07/11/2011	M21	70.24 PPM		08/17/2011	CMP-WO	100000.00	
				08/17/2011	M21	100000 PPM					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				08/17/2011	M21	102000 PPM		09/29/2011	CMP-WO	75000.00	
				09/29/2011	M21	75000 PPM					
				09/29/2011	M21	198700 PPM		10/10/2011	CMP-WO	79400.00	
				10/10/2011	M21	79400 PPM					
				10/10/2011	M21	133200 PPM		11/30/2011	CMP-WO	110400.00	
				11/30/2011	M21	110400 PPM					
				11/30/2011	M21	124500 PPM		12/15/2011	CMP-WO	144900.00	
				12/15/2011	M21	144900 PPM					
				12/15/2011	M21	18800 PPM		01/03/2012	CMP-WO	17900.00	
				01/03/2012	M21	17900 PPM					
				01/03/2012	M21	207500 PPM					
09C1	COMPRESSOR/ CENTRIFUGE	0.00	9C1 ALKY COMPRESSOR	*** Placed on Delay for Turnaround on 11/23/2009							
				08/17/2011	M21	100000 PPM	COM-CSE AL	08/17/2011	CMP-WO	102000.00	
				08/17/2011	M21	102000 PPM		09/29/2011	CMP-WO	75000.00	
				09/29/2011	M21	75000 PPM					
				09/29/2011	M21	198700 PPM		10/10/2011	CMP-WO	79400.00	
				10/10/2011	M21	79400 PPM					
				10/10/2011	M21	133200 PPM		11/30/2011	CMP-WO	110400.00	
				11/30/2011	M21	110400					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
						PPM					
				11/30/2011	M21	124500 PPM		12/15/2011	CMP-WO	144900.00	
				12/15/2011	M21	144900 PPM					
				12/15/2011	M21	18800 PPM		01/03/2012	CMP-WO	17900.00	
				01/03/2012	M21	17900 PPM					
				01/03/2012	M21	207500 PPM					
10589	VALVE	1.00	DEETH OVHD CNDNSR S GLASS 9E15 DRAIN VLV S SIDE								
				10/07/2011	M21	305100 PPM	VLV-PLUG	10/07/2011	VLV-TPL G	305100.00	
				10/07/2011	M21	305100 PPM		10/11/2011	VLV-PLU	33.00	
				10/11/2011	M21	33 PPM					10/11/2011
10613	VALVE	0.75	TOP 9V18								
				10/07/2011	M21	41000 PPM	VLV-PLUG	10/07/2011	VLV-TPL G	11700.00	
				10/07/2011	M21	11700 PPM		10/11/2011	VLV-TPL G	49.00	
				10/11/2011	M21	49 PPM					10/11/2011
10679	PUMP	0.00	9P37								
				11/02/2011	VIS	F	PMP-FLG	11/02/2011	PMP-WS E	10000.00	
				11/02/2011	M21	10000 PPM		11/02/2011	PMP-WS E	0.00	
				11/02/2011	VIS	F					
				11/02/2011	M21	10000 PPM		11/09/2011	PMP-WS E	0.00	
				11/09/2011	VIS	F		11/15/2011	PMP-TCA	0.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
SE											
				11/15/2011	VIS	P					
				11/15/2011	M21	1500 PPM					11/15/2011
10679	PUMP	0.00	9P37	11/16/2011	VIS	F	PMP-SEAL	11/16/2011	PMP-WS E	0.00	
				11/17/2011	VIS	F		11/17/2011	PMP-WS E	6500.00	
				11/17/2011	M21	6500 PPM		11/23/2011	PMP-WS E	0.00	
				11/23/2011	VIS	P					
				11/23/2011	M21	428 PPM					11/23/2011
15601	VALVE/ BALL	1.00	TOP PLATFORM E OF 9V18	10/07/2011	M21	10100 PPM	VLV- SGL	10/07/2011	VLV-CL	10500.00	
				10/07/2011	M21	10500 PPM		10/14/2011	VLV-TFIT T	0.00	
				10/14/2011	VIS	P					
				10/14/2011	M21	42 PPM					10/14/2011
19608	VALVE	0.50	9V9 E SDESMPL STA AT BLD	10/07/2011	M21	12900 PPM	VLV-PKG	10/12/2011	VLV-TCO N	10.00	
				10/12/2011	M21	10 PPM					10/12/2011
19608	VALVE	0.50	9V9 E SDESMPL STA AT BLD	11/30/2011	M21	10078 PPM	VLV-PKG	12/01/2011	VLV-TP	45.00	
				12/01/2011	M21	45 PPM					12/01/2011
2-00200	VALVE/ GATE	0.75	DIB OVHD CNDNSRS BLEEDER TOP OF 9E10B NORTH END	10/07/2011	M21	14700 PPM	VLV-PLUG	10/11/2011	VLV-TPL G	8.00	
				10/11/2011	M21	8 PPM					10/11/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2-01941	PUMP	0.75	9P33 OFF OF 9V16	11/02/2011	VIS	F	PMP-SEAL	11/02/2011	PMP-WS E	10000.00	
				11/02/2011	M21	10000 PPM		11/02/2011	PMP-WS E	0.00	
				11/02/2011	VIS	F					
				11/02/2011	M21	10000 PPM		11/09/2011	PMP-WS E	0.00	
				11/09/2011	VIS	F		11/15/2011	PMP-TCA SE	0.00	
				11/15/2011	VIS	P					
				11/15/2011	M21	801 PPM					11/15/2011
20225	PUMP	0.00	6/0 9P6	10/07/2011	M21	73000 PPM	PMP-SEAL	10/07/2011	PMP-ST M	102800.00	
				10/07/2011	M21	102800 PPM					
				10/14/2011	VIS	P		10/14/2011	PMP-TBO	1024.00	
				10/14/2011	M21	1024 PPM					10/14/2011
20225	PUMP	0.00	6/0 9P6	11/30/2011	M21	35500 PPM	PMP-SCR	11/30/2011	PMP-TFI	164900.00	
				11/30/2011	M21	164900 PPM		12/01/2011	PMP-ST M	0.00	
				12/01/2011	VIS	P					
				12/01/2011	M21	305 PPM					12/01/2011
22655	VALVE/ QUICK	0.75	W OF 9C1 G/2	10/10/2011	M21	21300 PPM	VLV-PKG	10/10/2011	VLV-CL	13600.00	
				10/10/2011	M21	13600 PPM		10/11/2011	VLV-TP	286.00	
				10/11/2011	M21	286 PPM					10/11/2011
24110	VALVE/ BALL	0.00	SMPLSTAT 5FT N OF 9E35 REPLACEMENT IN *** Placed on Delay for Turnaround on 01/23/2009 Removed From Turnaround List on 11/29/2010 KIND WITH TAG 33460								



## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
24110	VALVE/ BALL	0.00	SMPLSTAT 5FT N OF 9E35 REPLACEMENT IN KIND WITH TAG 33460	*** Placed on Delay for Turnaround on 01/23/2009 Removed From Turnaround List on 11/29/2010							
				04/22/2009	M21	35600 PPM	VLV-BON	04/22/2009	VLV-TBO N	31100.00	
				04/22/2009	M21	31100 PPM		05/28/2009	VLV-TBO N	1260.00	
				05/28/2009	M21	1260 PPM					
				06/29/2009	M21	623 PPM		06/29/2009	VLV-TBO N	610.00	
				06/29/2009	M21	610 PPM					
				07/16/2009	M21	3616 PPM		07/16/2009	VLV-TBO N	1267.00	
				07/16/2009	M21	1267 PPM					
				08/17/2009	M21	2294 PPM		08/17/2009	VLV-TBO N	2065.00	
				08/17/2009	M21	2065 PPM					
				09/14/2009	M21	5222 PPM		09/14/2009	VLV-TBO N	4830.00	
				09/14/2009	M21	4830 PPM					
				10/14/2009	M21	4 PPM					
				11/20/2009	M21	46 PPM					
				12/10/2009	M21	46 PPM					
				01/12/2010	M21	189 PPM					
				02/02/2010	M21	3 PPM		03/23/2010	VLV-TBO N	774.00	
				03/23/2010	M21	774 PPM					
				03/23/2010	M21	931 PPM					
				04/18/2010	M21	17.41 PPM					
				05/23/2010	M21	1531 PPM		06/30/2010	VLV-TBO N	2264.00	
				06/30/2010	M21	2264 PPM					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				06/30/2010	M21	1955 PPM		07/07/2010	VLV-TBO N	2815.00	
				07/07/2010	M21	2815 PPM		07/07/2010	VLV-TBO N	2730.00	
				07/07/2010	M21	2730 PPM					
				08/24/2010	M21	144 PPM		09/21/2010	VLV-CL	460.00	
				09/21/2010	M21	460 PPM					
				09/21/2010	M21	156 PPM					
				10/03/2010	M21	74.22 PPM		11/29/2010	VLV-RV	2.00	
				11/29/2010	M21	2 PPM					
27200	VALVE/ BALL	0.25	SMPLSTAT 5FT N OF 9E35 REPLACEMENT IN KIND WITH TAG 33459	*** Placed on Delay for Turnaround on 01/23/2009 Removed From Turnaround List on 11/29/2010							
				04/22/2009	M21	12500 PPM	VLV-BON	04/22/2009	VLV-TBO N	954.00	
				05/28/2009	M21	954 PPM		05/28/2009	VLV-TBO N	986.00	
				06/29/2009	M21	986 PPM		06/29/2009	VLV-TBO N	900.00	
				06/29/2009	M21	900 PPM					
				07/20/2009	M21	16 PPM					
				08/17/2009	M21	36 PPM					
				09/14/2009	M21	37 PPM					
				10/14/2009	M21	42 PPM					
				11/20/2009	M21	43 PPM					
				12/10/2009	M21	41 PPM					
				01/12/2010	M21	21 PPM					
				02/02/2010	M21	3 PPM					
				03/23/2010	M21	46.49 PPM					
				04/18/2010	M21	52.12 PPM					

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 09

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				05/23/2010	M21	26.37 PPM					
				06/30/2010	M21	37.23 PPM		07/07/2010	VLV-TBO N	434.00	
				07/07/2010	M21	434 PPM					
				07/07/2010	M21	64.78 PPM					
				08/24/2010	M21	47.85 PPM					
				09/21/2010	M21	181 PPM					
				10/03/2010	M21	19.44 PPM		11/29/2010	VLV-RV	4.00	
				11/29/2010	M21	4 PPM					
32664	VALVE/ GATE	6.00	9V40 TOP PLTF @ 6" LINE OUT OF TOP OF VSL								
				10/07/2011	M21	12000 PPM	VLV-PKG	10/11/2011	VLV-TP	54.00	
				10/11/2011	M21	54 PPM					10/11/2011

## Process Unit 09 Summary

	Component Count	Leak Count
Total in Group	13	17
Total Valves	9	10
Total Pumps	3	5
Total Compressors	1	2
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 11

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
24461	VALVE/ CTRL	4.00	10FT SOUTH OF FCCU CHRGR HEATER 11PC0980								
				12/13/2011	M21	25200 PPM	VLV-PKG	12/13/2011	VLV-CL	21900.00	
				12/13/2011	M21	21900 PPM		12/14/2011	VLV-TP	480.00	
				12/14/2011	M21	480 PPM					12/14/2011

## Process Unit 11 Summary

	Component Count	Leak Count
Total in Group	1	1
Total Valves	1	1
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
13835	VALVE	0.25	SMPL PNL 10FT W OF 12P190A - TOP 3WAY	11/10/2011	M21	82600 PPM	VLV-SCR	11/10/2011	VLV-TFIT T	791.00	
				11/10/2011	M21	791 PPM					11/10/2011
24342	VALVE/ GATE	0.50	EL 7 FT 1 FT E OF 12P137 - N PRESS TAP REPLACEMENT IN KIND WITH TAG 33421	*** Placed on Delay for Turnaround on 08/31/2007 Removed From Turnaround List on 11/23/2010							
				08/18/2007	M21	26200 PPM	VLV-SCR	08/18/2007	VLV-WO W	26200.00	
				08/18/2007	M21	26200 PPM					
				08/18/2007	M21	26200 PPM					
				09/27/2007	M21	14900 PPM					
				10/31/2007	M21	801 PPM					
				11/05/2007	M21	88000 PPM		11/05/2007	VLV-TPL G	60000.00	
				11/05/2007	M21	60000 PPM					
				11/29/2007	M21	60000 PPM					
				12/28/2007	M21	91 PPM		01/31/2008	VLV-TFIT T	4850.00	
				01/31/2008	M21	4850 PPM					
				02/07/2008	M21	1521 PPM		02/07/2008	VLV-TFIT T	2269.00	
				02/07/2008	M21	2269 PPM					
				05/29/2008	M21	35 PPM					
				08/13/2008	M21	23 PPM					
				09/11/2008	M21	7 PPM					
				10/21/2008	M21	3642 PPM		10/21/2008	VLV-TPL G	584.00	
				10/21/2008	M21	584 PPM					
				11/24/2008	M21	128400 PPM		11/24/2008	VLV-TPL G	218400.00	
				11/24/2008	M21	218400					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
						PPM					
				12/17/2008	M21	8 PPM					
				01/27/2009	M21	106 PPM					
				02/05/2009	M21	991559 PPM		02/05/2009	VLV-TPL G	990016.00	
				02/05/2009	M21	990016 PPM					
				03/02/2009	M21	3552 PPM		03/02/2009	VLV-TFIT T	3421.00	
				03/02/2009	M21	3421 PPM					
				04/30/2009	M21	12 PPM					
				05/04/2009	M21	126200 PPM		05/04/2009	VLV-TPL G	124000.00	
				05/04/2009	M21	124000 PPM					
				06/22/2009	M21	17 PPM					
				07/31/2009	M21	13 PPM					
				08/05/2009	M21	28 PPM					
				09/23/2009	M21	78400 PPM		09/23/2009	VLV-TPL G	22300.00	
				09/23/2009	M21	22300 PPM					
				10/28/2009	M21	2017 PPM		10/28/2009	VLV-TPL G	4520.00	
				10/28/2009	M21	4520 PPM					
				11/17/2009	M21	21333 PPM		11/17/2009	VLV-TPL G	19884.00	
				11/17/2009	M21	19884 PPM					
				12/30/2009	M21	14230 PPM		12/30/2009	VLV-TPL	18962.00	
				12/30/2009	M21	18962 PPM					
				01/26/2010	M21	11520 PPM		01/26/2010	VLV-TIG	8963.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				01/26/2010	M21	8963 PPM					
				02/02/2010	M21	51 PPM					
				03/10/2010	M21	19.46 PPM		04/14/2010	VLV-TPL G	4360.00	
				04/14/2010	M21	4360 PPM					
				05/12/2010	M21	8505 PPM					
				06/29/2010	M21	1.75 PPM		07/30/2010	VLV-TPL G	3443.00	
				07/30/2010	M21	3443 PPM		07/30/2010	VLV-TPL G	2148.00	
				07/30/2010	M21	2148 PPM		08/17/2010	VLV-TPL G	27300.00	
				08/17/2010	M21	27300 PPM		08/17/2010	VLV-TPL G	15800.00	
				08/17/2010	M21	15800 PPM		09/24/2010	VLV-TP	897.00	
				09/24/2010	M21	897 PPM					
				09/24/2010	M21	187 PPM					
				10/09/2010	M21	58.74 PPM		11/23/2010	VLV-TP	2.00	
				11/23/2010	M21	2 PPM					
24343	VALVE/ GATE	0.50	EL 7 FT 1 FT E OF 12P137 - S PRESS TAP REPLACEMENT IN KIND WITH TAG 33422	*** Placed on Delay for Turnaround on 08/31/2007 Removed From Turnaround List on 11/23/2010							
				08/18/2007	M21	36300 PPM	VLV-PLUG				
				08/18/2007	M21	36300 PPM		08/18/2007	VLV-TPL G	36300.00	
				08/18/2007	M21	36300 PPM					
				09/27/2007	M21	156200 PPM					
				10/31/2007	M21	42000 PPM					
				11/05/2007	M21	89300 PPM		11/05/2007	VLV-TPL G	357400.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				11/05/2007	M21	357400 PPM					
				12/28/2007	M21	33900 PPM		12/28/2007	VLV-TPL G	13900.00	
				12/28/2007	M21	13900 PPM		01/31/2008	VLV-TFIT T	24000.00	
				01/31/2008	M21	24000 PPM					
				02/07/2008	M21	30500 PPM		02/07/2008	VLV-TFIT T	58600.00	
				02/07/2008	M21	58600 PPM		03/31/2008	VLV-WO W	588600.00	
				03/31/2008	M21	588600 PPM					
				04/28/2008	M21	20500 PPM		04/28/2008	VLV-TPL G	14800.00	
				04/28/2008	M21	14800 PPM					
				05/29/2008	M21	133 PPM					
				06/26/2008	M21	12600 PPM		06/26/2008	VLV-TPL G	22000.00	
				06/26/2008	M21	22000 PPM					
				07/10/2008	M21	3 PPM					
				08/13/2008	M21	115 PPM					
				09/11/2008	M21	7 PPM					
				10/21/2008	M21	59500 PPM		10/21/2008	VLV-TPL G	84800.00	
				10/21/2008	M21	84800 PPM					
				11/24/2008	M21	149200 PPM		11/24/2008	VLV-TPL G	147000.00	
				11/24/2008	M21	147000 PPM					



## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				12/17/2008	M21	10 PPM					
				01/27/2009	M21	35 PPM					
				02/05/2009	M21	855000 PPM		02/05/2009	VLV-TPL G	851999.00	
				02/05/2009	M21	851999 PPM					
				03/20/2009	M21	544 PPM		03/20/2009	VLV-TGA UGE	753600.00	
				03/20/2009	M21	753600 PPM					
				04/30/2009	M21	24 PPM					
				05/04/2009	M21	302186 PPM		05/04/2009	VLV-TPL G	168236.00	
				05/04/2009	M21	168236 PPM					
				06/22/2009	M21	15 PPM					
				07/31/2009	M21	15 PPM					
				08/05/2009	M21	26300 PPM		08/05/2009	VLV-TPL G	8848.00	
				08/05/2009	M21	8848 PPM					
				09/23/2009	M21	33900 PPM		09/23/2009	VLV-TPL G	2363.00	
				09/23/2009	M21	2363 PPM					
				10/28/2009	M21	948 PPM		10/28/2009	VLV-TPL G	1647.00	
				10/28/2009	M21	1647 PPM					
				11/17/2009	M21	66000 PPM		11/17/2009	VLV-TGA UGE	44569.00	
				11/17/2009	M21	44569 PPM					
				12/30/2009	M21	8200 PPM		12/30/2009	VLV-TPL	6415.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				12/30/2009	M21	6415 PPM					
				01/26/2010	M21	7233 PPM		01/26/2010	VLV-TPL	5122.00	
				01/26/2010	M21	5122 PPM					
				02/02/2010	M21	17 PPM					
				03/10/2010	M21	18.99 PPM		04/14/2010	VLV-TPL G	20000.00	
				04/14/2010	M21	20000 PPM					
				05/12/2010	M21	1317 PPM					
				06/29/2010	M21	185 PPM					
				07/28/2010	M21	73100 PPM		08/17/2010	VLV-TPL G	4321.00	
				08/17/2010	M21	4321 PPM		09/24/2010	VLV-TFIT T	3601.00	
				09/24/2010	M21	3601 PPM					
				09/24/2010	M21	2843 PPM					
				10/09/2010	M21	51.32 PPM		11/23/2010	VLV-RV	2.00	
				11/23/2010	M21	2 PPM					
29171	PUMP	0.00	12P143B WEST OF 12V35								
				11/22/2011	VIS	F		11/22/2011	PMP-WS E	0.00	
				11/22/2011	VIS	F		11/28/2011	PMP-WS E	75.00	
				11/28/2011	M21	75 PPM					
				11/28/2011	VIS	P					11/28/2011
3-00280	PUMP	0.75	PUMP 12P120								
				10/18/2011	M21	10100 PPM	PMP-SEAL	10/18/2011	PMP-WS E	8415.00	
				10/18/2011	M21	8415 PPM		10/18/2011	PMP-WS E	1387.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
3-00280	PUMP	0.75	PUMP 12P120	10/18/2011	M21	1387 PPM					10/18/2011
				12/15/2011	M21	33000 PPM	PMP-SEAL	12/19/2011	PMP-WS E	3600.00	
				12/19/2011	M21	3600 PPM					12/19/2011
3-00444	VALVE/ CTRL	2.00	12P165/166 CLP12FC0308	11/10/2011	M21	31600 PPM	VLV-PKG	11/10/2011	VLV-CL	45700.00	
				11/10/2011	M21	45700 PPM		11/15/2011	VLV-CL	38.00	
				11/15/2011	M21	38 PPM					11/15/2011
3-01670	VALVE/ NEEDLE	0.25	G 1/10 @ 12V26 Level 2/5 - North side	11/11/2011	M21	11800 PPM	VLV-SCR	11/11/2011	VLV-CL	13500.00	
				11/11/2011	M21	13500 PPM		11/15/2011	VLV-TFIT T	15000.00	
				11/15/2011	M21	15000 PPM		11/21/2011	VLV-RFIT T	34.00	
				11/21/2011	M21	34 PPM					11/21/2011
3-01822	VALVE/ GATE	3.00	1/1 21V3 REPLACEMENT IN KIND WITH TAG 33424	*** Placed on Delay for Turnaround on 09/05/2007 Removed From Turnaround List on 11/23/2010							
				08/21/2007	M21	184900 PPM	VLV-PKG	08/21/2007	VLV-TP	184900.00	
				08/21/2007	M21	184900 PPM					
				08/21/2007	M21	38000 PPM		08/28/2007	VLV-INJ	39000.00	
				08/28/2007	M21	39000 PPM		08/28/2007	VLV-INJ	38000.00	
				08/28/2007	M21	38000 PPM					
				09/12/2007	M21	38000 PPM					
				10/31/2007	M21	1938 PPM					
				11/06/2007	M21	601 PPM		11/06/2007	VLV-TIG	1334.00	
				11/06/2007	M21	1334 PPM					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				11/29/2007	VIS	F					
				11/29/2007	M21	9520 PPM					
				12/07/2007	VIS	P					
				12/28/2007	M21	155 PPM					
				02/07/2008	M21	606 PPM		02/07/2008	VLV-TIG	789.00	
				02/07/2008	M21	789 PPM					
				05/23/2008	M21	898 PPM		05/23/2008	VLV-TGA UGE	1833.00	
				05/23/2008	M21	1833 PPM					
				08/13/2008	M21	1435 PPM		08/13/2008	VLV-TGA UGE	404.00	
				08/13/2008	M21	404 PPM					
				09/11/2008	M21	30 PPM					
				10/21/2008	M21	1211 PPM		10/21/2008	VLV-TGA UGE	1072.00	
				10/21/2008	M21	1072 PPM					
				11/11/2008	M21	18 PPM					
				12/17/2008	M21	8 PPM					
				01/27/2009	M21	29 PPM					
				02/17/2009	M21	850 PPM		02/17/2009	VLV-TGA UGE	1110.00	
				02/17/2009	M21	1110 PPM					
				03/20/2009	M21	2019 PPM		03/20/2009	VLV-TGA UGE	1513.00	
				03/20/2009	M21	1513 PPM					
				04/30/2009	M21	23 PPM					
				05/06/2009	M21	2605 PPM		05/06/2009	VLV-TGA UGE	3027.00	
				05/06/2009	M21	3027 PPM					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				06/22/2009	M21	15 PPM					
				07/31/2009	M21	897 PPM		07/31/2009	VLV-TGA UGE	923.00	
				07/31/2009	M21	923 PPM					
				08/06/2009	M21	1438 PPM		08/06/2009	VLV-TGA UGE	2226.00	
				08/06/2009	M21	2226 PPM					
				09/23/2009	M21	1469 PPM		09/23/2009	VLV-TGA UGE	705.00	
				09/23/2009	M21	705 PPM					
				10/28/2009	M21	6 PPM					
				11/17/2009	M21	657 PPM		11/17/2009	VLV-TGA UGE	772.00	
				11/17/2009	M21	772 PPM					
				12/30/2009	M21	909 PPM		12/30/2009	VLV-TIG	652.00	
				12/30/2009	M21	652 PPM					
				01/26/2010	M21	547 PPM		01/26/2010	VLV-TIG	544.00	
				01/26/2010	M21	544 PPM					
				02/10/2010	M21	128 PPM					
				03/10/2010	M21	27.39 PPM		04/14/2010	VLV-TP	2200.00	
				04/14/2010	M21	2200 PPM					
				05/10/2010	M21	653 PPM					
				06/29/2010	M21	187 PPM		07/30/2010	VLV-TP	571.00	
				07/30/2010	M21	571 PPM		07/30/2010	VLV-TP	625.00	
				07/30/2010	M21	625 PPM		08/17/2010	VLV-TP	518.00	
				08/17/2010	M21	518 PPM		08/17/2010	VLV-TP	450.00	
				08/17/2010	M21	450 PPM					
				09/24/2010	M21	1.8 PPM		10/07/2010	VLV-TP	591.00	
				10/07/2010	M21	591 PPM					

## Process Unit : 12-21

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				10/07/2010	M21	543 PPM		11/23/2010	VLV-RV	2.00	
				11/23/2010	M21	2 PPM					
33537	VALVE/ CTRL	4.00	CTRL LP E OF 12C8 PLTFM 12UC0418	*** Placed on Delay for Turnaround on 11/22/2011							
				11/10/2011	M21	11500 PPM	VLV-PKG	11/10/2011	VLV-CP	40800.00	
				11/10/2011	M21	40800 PPM		11/15/2011	VLV-TP	1400.00	
				11/15/2011	M21	1400 PPM					11/15/2011
34167	VALVE	2.00	12V26 4/0 SW SIDE - 12FC0306 - SATS DEPROP NET OVHD LIQUID								
				11/11/2011	M21	37300 PPM	VLV-PKG	11/15/2011	VLV-CL	92.00	
				11/15/2011	M21	92 PPM					11/15/2011
34348	VALVE/ BLOCK	3.00	12V36 LVL 1 CL BLK VLV								
				11/11/2011	M21	32400 PPM	VLV-PKG	11/11/2011	VLV-TP	92.00	
				11/11/2011	M21	92 PPM					11/11/2011

## Process Unit 12-21 Summary

	Component Count	Leak Count
Total in Group	11	12
Total Valves	9	9
Total Pumps	2	3
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 13

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
13854	VALVE	0.50	DEETH REFLUX D.P. CELL AND ORFICE-13-13-13-13-13								
				12/13/2011	M21	49100 PPM	VLV-PKG	12/14/2011	VLV-TP	45.00	
				12/14/2011	M21	45 PPM					12/14/2011
13864	VALVE/ NEEDLE	0.25	13E4 SMPL PNL								
				12/07/2011	M21	36300 PPM	VLV-PKG	12/07/2011	VLV-CL	34100.00	
				12/07/2011	M21	34100 PPM		12/14/2011	VLV-TP	7.00	
				12/14/2011	M21	7 PPM					12/14/2011
14272	VALVE	0.75	N SDE 13C20								
				12/14/2011	M21	312200 PPM	VLV-PLUG	12/14/2011	VLV-TPL G	29800.00	
				12/14/2011	M21	29800 PPM		12/15/2011	VLV-TPL G	12.00	
				12/15/2011	M21	12 PPM					12/15/2011
14994	VALVE	0.75	W SDE 13V5 UP LADDER								
				11/15/2011	M21	43400 PPM	VLV-PKG	11/15/2011	VLV-CL	84100.00	
				11/15/2011	M21	84100 PPM		11/16/2011	VLV-TP	67.00	
				11/16/2011	M21	67 PPM					11/16/2011
15059	VALVE	2.00	13E4 CTRL LP 13FC469								
				12/07/2011	M21	101000 PPM	VLV-SCR	12/07/2011	VLV-CL	30300.00	
				12/07/2011	M21	30300 PPM		12/14/2011	VLV-TFIT T	22.00	
				12/14/2011	M21	22 PPM					12/14/2011
15777	VALVE/ GATE	0.75	L1 13V2								
				12/13/2011	M21	80600 PPM	VLV-PLUG	12/13/2011	VLV-TPL G	40.86	
				12/13/2011	M21	40.86 PPM					12/13/2011
19941	VALVE/ CTRL	1.00	CNTLP BTW @ 13P264 & 13P261 13FC405								
				11/15/2011	M21	79200 PPM	VLV-CONN	11/15/2011	VLV-CL	45300.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 13

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
19941	VALVE/ CTRL	1.00	CNTLP BTW @ 13P264 & 13P261	13FC405							
							EC				
				11/15/2011	M21	45300 PPM		11/16/2011	VLV-TFL G	1700.00	
				11/16/2011	M21	1700 PPM		11/16/2011	VLV-TFL G	402.00	
				11/16/2011	M21	402 PPM					11/16/2011
31879	VALVE	1.00	TOP 13V2								
							*** Placed on Delay for Turnaround on 09/20/2011				
				09/14/2011	M21	123700 PPM	VLV-FLG	09/14/2011	VLV-TFL G	23500.00	
				09/14/2011	M21	23500 PPM		10/18/2011	VLV-CL	12900.00	
				10/18/2011	M21	12900 PPM					
				10/18/2011	M21	80300 PPM					
				11/15/2011	M21	2.88 PPM					
				12/13/2011	M21	3.88 PPM					
40363	VALVE/ BALL	0.75	E SDE 13E3A BTM SG								
				12/13/2011	M21	50700 PPM	VLV- SGL	12/13/2011	VLV-CL	245000.00	
				12/13/2011	M21	245000 PPM		12/14/2011	VLV-TCO N	101.00	
				12/14/2011	M21	101 PPM					12/14/2011
41355	PUMP	0.00	13P294								
				12/13/2011	VIS	F	PMP-SCR	12/13/2011	PMP-TFI	29600.00	
				12/13/2011	M21	29600 PPM					
				12/13/2011	M21	3720 PPM					
				12/13/2011	VIS	P					12/13/2011



**Process Unit : 13**

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
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**Process Unit 13 Summary**

	Component Count	Leak Count
Total in Group	10	10
Total Valves	9	9
Total Pumps	1	1
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 14

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
23567	VALVE	0.75	S SDE 14V39B	10/05/2011	M21	14300 PPM	VLV-CONN EC	10/11/2011	VLV-TCO N	6.00	
				10/11/2011	M21	6 PPM					10/11/2011
24010	VALVE	0.50	SEAL POT 14P9A	10/04/2011	M21	29500 PPM	VLV-PKG	10/11/2011	VLV-TP	13.00	
				10/11/2011	M21	13 PPM					10/11/2011
27113	VALVE/ GATE	0.75	EAST END 14V32 BOOSTER GAS @ ROADWAY ACROSS FROM BOILER FEED WATER BUILDING UNDER CCR TOWER	10/05/2011	M21	11400 PPM	VLV-PLUG	10/05/2011	VLV-TPL G	10100.00	
				10/05/2011	M21	10100 PPM		10/07/2011	VLV-TPL G	185.00	
				10/07/2011	M21	185 PPM					10/07/2011
4-00822	VALVE	0.75	BLEEDER TOP EXCHANGER SR DEBUT FEED tube side OVHD	10/28/2011	M21	13200 PPM	VLV-PLUG	10/28/2011	VLV-TPL G	5464.00	
				10/28/2011	M21	5464 PPM		10/28/2011	VLV-TPL G	36.00	
				10/28/2011	M21	36 PPM					10/28/2011
4-00866	VALVE	0.75	E SDE 14V6 @ SG UP LADDER	10/05/2011	M21	10800 PPM	VLV-TUB	10/05/2011	VLV-CL	18900.00	
				10/05/2011	M21	18900 PPM		10/11/2011	VLV-TFIT T	289.00	
				10/11/2011	M21	289 PPM					10/11/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

**Process Unit : 14**

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
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**Process Unit 14 Summary**

	Component Count	Leak Count
Total in Group	5	5
Total Valves	5	5
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 16

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
6530	VALVE/ CTRL	4.00	CV 16FC0610 EAST OF 16H3	09/29/2011	M21	539 PPM	VLV-PKG	09/29/2011	VLV-CL	773.00	
				09/29/2011	M21	773 PPM		10/05/2011	VLV-TP	255.00	
				10/05/2011	M21	255 PPM					10/05/2011
6530	VALVE/ CTRL	4.00	CV 16FC0610 EAST OF 16H3	11/08/2011	M21	1018 PPM	VLV-PKG	11/08/2011	VLV-CL	1153.00	
				11/08/2011	M21	1153 PPM		11/09/2011	VLV-CL	109.00	
				11/09/2011	M21	109 PPM					11/09/2011
6530	VALVE/ CTRL	4.00	CV 16FC0610 EAST OF 16H3	12/15/2011	M21	2883 PPM	VLV-PKG	12/15/2011	VLV-CL	1908.00	
				12/15/2011	M21	1908 PPM		12/19/2011	VLV-CL	311.00	
				12/19/2011	M21	311 PPM					12/19/2011
6545	VALVE/ CTRL	4.00	CL 16FC0611 EAST OF 16H3	10/18/2011	M21	1279 PPM	VLV-PKG	10/18/2011	VLV-CP	1267.00	
				10/18/2011	M21	1267 PPM		10/20/2011	VLV-CL	294.00	
				10/20/2011	M21	294 PPM					10/20/2011
6545	VALVE/ CTRL	4.00	CL 16FC0611 EAST OF 16H3	11/08/2011	M21	595 PPM	VLV-PKG	11/08/2011	VLV-CL	604.00	
				11/08/2011	M21	604 PPM		11/09/2011	VLV-CL	39.00	
				11/09/2011	M21	39 PPM					11/09/2011
6545	VALVE/ CTRL	4.00	CL 16FC0611 EAST OF 16H3	12/15/2011	M21	838 PPM	VLV-PKG	12/15/2011	VLV-CL	1183.00	
				12/15/2011	M21	1183 PPM		12/19/2011	VLV-CP	137.00	
				12/19/2011	M21	137 PPM					12/19/2011
6570	VALVE/ BLEEDER	0.75	10' EAST OF 16H3 REBOILER ON CONTROL LOOP 16PC0518	11/08/2011	M21	6655 PPM	VLV-PLUG	11/08/2011	VLV-TPL G	5481.00	
				11/08/2011	M21	5481 PPM		11/08/2011	VLV-TPL G	28.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 16

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				11/09/2011	M21	28 PPM		11/09/2011	VLV-TPL G		11/09/2011
6608	VALVE	4.00	CV 16FC0613 EAST OF 16H3	09/29/2011	M21	1065 PPM	VLV-PKG	09/29/2011	VLV-CL	1053.00	
				09/29/2011	M21	1053 PPM		10/05/2011	VLV-CL	96.00	
				10/05/2011	M21	96 PPM					10/05/2011
6608	VALVE	4.00	CV 16FC0613 EAST OF 16H3	12/15/2011	M21	1263 PPM	VLV-PKG	12/15/2011	VLV-CL	1672.00	
				12/15/2011	M21	1672 PPM		12/19/2011	VLV-CL	370.00	
				12/19/2011	M21	370 PPM					12/19/2011
6734	VALVE/ BLEEDER	0.75	CTRL LOOP 10' SOUTHWEST OF 16V8	11/08/2011	M21	65700 PPM	VLV-PLUG	11/08/2011	VLV-TPL G	14100.00	
				11/08/2011	M21	14100 PPM		11/11/2011	VLV-TPL G	31.00	
				11/11/2011	M21	31 PPM					11/11/2011
6860	PUMP	0.00	16P99 SOUTH OF 16V2	10/18/2011	M21	2004 PPM	PMP-SCR	10/18/2011	PMP-TFI	2026.00	
				10/18/2011	M21	2026 PPM		10/19/2011	PMP-TFI	1086.00	
				10/19/2011	M21	1086 PPM					10/19/2011
6927	VALVE/ BLEEDER	1.00	WEST OF 16V2 ON PLATFORM	09/29/2011	M21	4245 PPM	VLV-PKG	09/29/2011	VLV-TP	3929.00	
				09/29/2011	M21	3929 PPM		10/05/2011	VLV-TP	126.00	
				10/05/2011	M21	126 PPM					10/05/2011
6927	VALVE/ BLEEDER	1.00	WEST OF 16V2 ON PLATFORM	11/08/2011	M21	1019 PPM	VLV-PKG	11/08/2011	VLV-TP	1029.00	
				11/08/2011	M21	1029 PPM		11/09/2011	VLV-TP	16.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 16

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
6927	VALVE/ BLEEDER	1.00	WEST OF 16V2 ON PLATFORM	11/09/2011	M21	16 PPM					11/09/2011
				12/15/2011	M21	2603 PPM	VLV-PKG	12/15/2011	VLV-TP	676.00	
				12/15/2011	M21	676 PPM		12/19/2011	VLV-TP	201.00	
				12/19/2011	M21	201 PPM					12/19/2011
6945	VALVE/ NEEDLE	0.25	10' SOUTH OF 16P86 DP CELL @ PILLAR	11/08/2011	M21	38100 PPM	VLV-PKG	11/08/2011	VLV-CL	76600.00	
				11/08/2011	M21	76600 PPM		11/11/2011	VLV-TP	21.00	
				11/11/2011	M21	21 PPM					11/11/2011
7060	VALVE/ NEEDLE	0.50	SOUTH SIDE OF PUMP 16P271 ON DISCHARGE LINE @ GAUGE	11/08/2011	M21	9159 PPM	VLV-SCR	11/08/2011	VLV-CL	1927.00	
				11/08/2011	M21	1927 PPM		11/09/2011	VLV-TFIT T	63.00	
				11/09/2011	M21	63 PPM					11/09/2011
7060	VALVE/ NEEDLE	0.50	SOUTH SIDE OF PUMP 16P271 ON DISCHARGE LINE @ GAUGE	12/15/2011	M21	2896 PPM	VLV-CONN EC	12/15/2011	VLV-CL	3525.00	
				12/15/2011	M21	3525 PPM		12/19/2011	VLV-TCO N	235.00	
				12/19/2011	M21	235 PPM					12/19/2011
7230	PUMP	0.00	PUMP 16P299A NHT REFLUX SE 16V4	10/18/2011	M21	5523 PPM	PMP-SEAL	10/18/2011	PMP-WS E	8814.00	
				10/18/2011	M21	8814 PPM		10/19/2011	PMP-WS E	847.00	
				10/19/2011	M21	847 PPM					10/19/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 16

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
7230	PUMP	0.00	PUMP 16P299A NHT REFLUX SE 16V4	11/08/2011	M21	4618 PPM	PMP-SEAL	11/08/2011	PMP-WS E	6109.00	
				11/08/2011	M21	6109 PPM		11/09/2011	PMP-WS E	712.00	
				11/09/2011	M21	712 PPM					11/09/2011
7230	PUMP	0.00	PUMP 16P299A NHT REFLUX SE 16V4	12/15/2011	M21	10200 PPM	PMP-SEAL	12/15/2011	PMP-WS E	24100.00	
				12/15/2011	M21	24100 PPM		12/19/2011	PMP-WS E	0.00	
				12/19/2011	VIS	F		12/19/2011	PMP-WS E	2600.00	
				12/19/2011	M21	2600 PPM		12/27/2011	PMP-WS E	0.00	
				12/27/2011	VIS	P					
				12/27/2011	M21	207 PPM					12/27/2011
7313	VALVE/ BALL CHECK	0.75	L1 16V3 @ SIGHTGLASS	11/08/2011	M21	10200 PPM	VLV-PKG	11/08/2011	VLV-CL	11200.00	
				11/08/2011	M21	11200 PPM		11/15/2011	VLV-TP	133.00	
				11/15/2011	M21	133 PPM					11/15/2011
7345	PUMP	0.00	16P93 5' NORTHEAST OF 16V3	11/28/2011	VIS	F	PMP-PLG	11/28/2011	PMP-TPL	0.00	
				12/06/2011	VIS	F		12/06/2011	PMP-TPL	0.00	
				12/13/2011	VIS	P					
				12/15/2011	M21	2.36 PPM					12/15/2011
7361A	VALVE/ BUTTERFLY	4.00	FINFAN DECK 10' SOUTHEAST 16V3	10/18/2011	M21	1106 PPM	VLV-PKG	10/18/2011	VLV-CP	829.00	
				10/18/2011	M21	829 PPM		10/19/2011	VLV-TP	309.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 16

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
7361A	VALVE/ BUTTERFLY	4.00	FINFAN DECK 10' SOUTHEAST 16V3	10/19/2011	M21	309 PPM					10/19/2011
				11/08/2011	M21	749 PPM	VLV-PKG	11/08/2011	VLV-CL	834.00	
				11/08/2011	M21	834 PPM		11/09/2011	VLV-TP	182.00	
				11/09/2011	M21	182 PPM					11/09/2011
7361A	VALVE/ BUTTERFLY	4.00	FINFAN DECK 10' SOUTHEAST 16V3	12/15/2011	M21	558 PPM	VLV-PKG	12/15/2011	VLV-CL	182.00	
				12/15/2011	M21	182 PPM					12/15/2011
7384	VALVE/ BLOCK	0.50	EAST SIDE OF 16V4 DP CELL ON PLATFORM	10/18/2011	M21	574 PPM	VLV-PKG	10/18/2011	VLV-CP	775.00	
				10/18/2011	M21	775 PPM		10/20/2011	VLV-TP	114.00	
				10/20/2011	M21	114 PPM					10/20/2011
7385	VALVE/ BLOCK	0.50	EAST SIDE OF 16V4 DP CELL ON PLATFORM	10/18/2011	M21	992 PPM	VLV-PKG	10/18/2011	VLV-CP	1431.00	
				10/18/2011	M21	1431 PPM		10/20/2011	VLV-TP	318.00	
				10/20/2011	M21	318 PPM					10/20/2011
7392	VALVE/ BALL CHECK	1.00	EAST SIDE OF 16V4 SIGHT GLASS ON PLATFORM	11/08/2011	M21	512 PPM	VLV-PKG	11/08/2011	VLV-CL	257.00	
				11/08/2011	M21	257 PPM					11/08/2011
7490	PUMP	0.00	16P96 SOUTH OF 16T2	11/22/2011	VIS	F	PMP-SCR	11/28/2011	PMP-TFI	0.00	
				11/28/2011	VIS	F		12/06/2011	PMP-TFI	0.00	
				12/06/2011	VIS	F		12/06/2011	PMP-TFI	0.00	
				12/06/2011	VIS	P					
				12/06/2011	M21	103 PPM					12/06/2011



## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 16

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
7526	VALVE/ GATE	0.75	25FT S OF 11V45.	11/08/2011	M21	574 PPM	VLV-PKG	11/08/2011	VLV-TP	506.00	
				11/08/2011	M21	506 PPM		11/09/2011	VLV-TP	43.00	
				11/09/2011	M21	43 PPM					11/09/2011
7530	VALVE/ GATE	8.00	26FT S OF 11V45.	11/08/2011	M21	586 PPM	VLV-PKG	11/08/2011	VLV-TP	618.00	
				11/08/2011	M21	618 PPM		11/09/2011	VLV-TP	91.00	
				11/09/2011	M21	91 PPM					11/09/2011
7530	VALVE/ GATE	8.00	26FT S OF 11V45.	12/15/2011	M21	727 PPM	VLV-PKG	12/15/2011	VLV-TP	171.00	
				12/15/2011	M21	171 PPM					12/15/2011
7558	VALVE/ NEEDLE	0.50	EAST OF BW BOILER @ FUEL GAS LINE.	*** Placed on Delay for Turnaround on 03/25/2011 Removed From Turnaround List on 07/27/2011							
				03/14/2011	M21	1179 PPM	VLV-TUB	03/14/2011	VLV-TFIT T	64100.00	
				03/14/2011	M21	64100 PPM		03/17/2011	VLV-TFIT T	6870.00	
				03/17/2011	M21	6870 PPM					
				04/14/2011	M21	174 PPM		05/12/2011	VLV-CL	1365.00	
				05/12/2011	M21	1365 PPM					
				05/12/2011	M21	2411 PPM		06/15/2011	VLV-TFIT T	1633.00	
				06/15/2011	M21	1633 PPM					
				06/15/2011	M21	1284 PPM		07/27/2011	VLV-RV	7.78	
				07/27/2011	M21	7.78 PPM					
				08/04/2011	M21	4.85 PPM					
				09/29/2011	M21	11.41 PPM					
				10/18/2011	M21	6.24 PPM					
				11/08/2011	M21	3.88 PPM					
				12/15/2011	M21	5.03 PPM					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 16

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
7768	VALVE/ GATE	1.00	MSAT 16P303B HNS BTMS PMP SUCT LINE @PI	09/29/2011	M21	1371 PPM	VLV-CONN EC	09/29/2011	VLV-CL	896.00	
				09/29/2011	M21	896 PPM		10/05/2011	VLV-TCO N	46.00	
				10/05/2011	M21	46 PPM					10/05/2011
7788	PUMP	0.00	MSAT 16P303B HNS BTMS PMP	11/08/2011	M21	2903 PPM	PMP-TUB	11/08/2011	PMP-TFI	4367.00	
				11/08/2011	M21	4367 PPM		11/09/2011	PMP-TFI	376.00	
				11/09/2011	M21	376 PPM					11/09/2011
8040	VALVE/ GATE	0.75	MSAT 16V15 HNS OVHD RECV SG TOP	11/08/2011	M21	980 PPM	VLV-CONN EC	11/08/2011	VLV-CL	1616.00	
				11/08/2011	M21	1616 PPM		11/16/2011	VLV-PLU	5.00	
				11/16/2011	M21	5 PPM					11/16/2011
8040	VALVE/ GATE	0.75	MSAT 16V15 HNS OVHD RECV SG TOP	12/15/2011	M21	2410 PPM	VLV-PLUG	12/15/2011	VLV-CAP	1513.00	
				12/15/2011	M21	1513 PPM		12/19/2011	VLV-PLU	87.00	
				12/19/2011	M21	87 PPM					12/19/2011

## Process Unit 16 Summary

	Component Count	Leak Count
Total in Group	23	37
Total Valves	18	30
Total Pumps	5	7
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 19

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
0196A.01	CONNECTOR/ UNION	1.00	19H2 btm burner 3	10/03/2011	M21	32800 PPM	CON-SCR	10/03/2011	CON-TU	22500.00	
				10/03/2011	M21	22500 PPM		10/17/2011	CON-TU	201.00	
				10/17/2011	M21	201 PPM					10/17/2011
0197	CONNECTOR/ UNION	2.00	19H2 btm burner 2	10/03/2011	M21	1995 PPM	CON-UNION	10/03/2011	CON-CLA	3000.00	
				10/03/2011	M21	3000 PPM		10/17/2011	CON-TU	254.00	
				10/17/2011	M21	254 PPM					10/17/2011
0198	CONNECTOR/ UNION	2.00	19H2 btm burner 1	10/03/2011	M21	1189 PPM	CON-UNION	10/03/2011	CON-CLA	2933.00	
				10/03/2011	M21	2933 PPM		10/17/2011	CON-TU	109.00	
				10/17/2011	M21	109 PPM					10/17/2011
0284.01	CONNECTOR/ UNION	1.50	PILOT GAS LOOP 5' S OF 19V102	10/03/2011	M21	13600 PPM	CON-UNION	10/03/2011	CON-CLA	34600.00	
				10/03/2011	M21	34600 PPM		10/10/2011	CON-TC ON	47.00	
				10/10/2011	M21	47 PPM					10/10/2011
0632	VALVE/ BALL	0.75	19V7 KO DRUM SG TOP BV	10/03/2011	M21	678 PPM	VLV-PKG	10/03/2011	VLV-CL	884.00	
				10/03/2011	M21	884 PPM		10/10/2011	VLV-TP	11.00	
				10/10/2011	M21	11 PPM					10/10/2011
0703	VALVE/ GATE	1.50	S of 19V4								

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 19

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
0703	VALVE/ GATE	1.50	S of 19V4	10/03/2011	M21	532 PPM	VLV-PKG	10/03/2011	VLV-TP	607.00	
				10/03/2011	M21	607 PPM		10/06/2011	VLV-TP	880.00	
				10/06/2011	M21	880 PPM		10/07/2011	VLV-INJ	308.00	
				10/07/2011	M21	308 PPM					10/07/2011
0703	VALVE/ GATE	1.50	S of 19V4	11/15/2011	M21	624 PPM	VLV-PKG	11/15/2011	VLV-CL	589.00	
				11/15/2011	M21	589 PPM		11/16/2011	VLV-TP	184.00	
				11/16/2011	M21	184 PPM					11/16/2011

## Process Unit 19 Summary

	Component Count	Leak Count
Total in Group	6	7
Total Valves	2	3
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	4	4
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 34

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
4721	VALVE/ WTR DRW	8.00	SOUTH OF TK176	10/20/2011	VIS	F	VLV-CAP	10/20/2011	VLV-TCA P	14.27	
				10/20/2011	M21	14.27 PPM					
				10/20/2011	VIS	F		10/21/2011	VLV-TCA P	0.00	
				10/21/2011	VIS	P					
				10/21/2011	M21	0 PPM					10/21/2011
4721	VALVE/ WTR DRW	8.00	SOUTH OF TK176	11/03/2011	M21	18100 PPM	VLV-SEL	11/07/2011	VLV-TCA P	7.00	
				11/07/2011	M21	7 PPM					11/07/2011
4834	VALVE/ GATE	1.00	N PR NE OF TK101 @ DIKEWALL	11/03/2011	M21	11300 PPM	VLV-PKG	11/07/2011	VLV-TP	131.00	
				11/07/2011	M21	131 PPM					11/07/2011
4940	VALVE/ WTR DRW	6.00	NW SIDE OF TK101 H2O DRAW	11/03/2011	M21	83100 PPM	WTR DRW CA	11/03/2011	ATTB	88900.00	
				11/03/2011	M21	88900 PPM		11/07/2011	VLV-TCA P	96.00	
				11/07/2011	M21	96 PPM					11/07/2011
5244	VALVE/ WTR DRW	6.00	SOUTH WEST SIDE OF TK109	11/15/2011	VIS	F	WTR DRW CA	11/15/2011	VLV-CL	4954.00	
				11/15/2011	M21	4954 PPM					
				11/15/2011	M21	1439 PPM		11/16/2011	VLV-TCA P	0.00	
				11/16/2011	VIS	P					

## Process Unit : 34

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				11/16/2011	M21	101 PPM					11/16/2011
5365	VALVE	6.00	SOUTH OF TK113	*** This component was not found to be leaking for this monitoring program but a workorder was created to manage repair actions							
				11/03/2011	M21	144 PPM	VLV-CAP				
				11/03/2011	VIS	P		11/03/2011	VLV-CAP	75.00	
				11/03/2011	M21	75 PPM					
				11/03/2011	VIS	P					11/03/2011
5599	VALVE	6.00	SOUTH SIDE OF TK114								
				11/07/2011	VIS	F	VLV-CAP	11/07/2011	ATSC	8.00	
				11/07/2011	M21	8 PPM					
				11/07/2011	VIS	P					
				11/07/2011	M21	8 PPM					11/07/2011

## Process Unit 34 Summary

	Component Count	Leak Count
Total in Group	6	7
Total Valves	6	7
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0



**Table 4**  
**Wastewater System Monitoring - Fourth Quarter 2011**  
**Michigan Refining Division**

Complex	Unit	Tag ID	Date	Service/Description	First Attempt	Recommended Fix	Final Repair	Final Repair Date
1	5	773	12/9/2010	Catch basin Northeast of Desalter by Elec Boxes	Work Order Written	Engineer Optimum Design	Redesigned Cover	11/14/2011
1	29	DEPT API	6/15/2011	DEPT OWS Separator Hatch	Work Order Written	Engineer Optimum Design	Installed New Hatches	11/4/2011
4	16	314	9/20/2011	Catch Basin Southwest of 27BR8 Near Road	Add Water	Add Water	Water Added	10/24/2011
3	11	580	10/3/2011	Junction Box Southwest of Cooling Tower C in Roadway	Secure Lid	Secure Lid	Lid Secured	10/6/2011
3	12-21	592	10/3/2011	Catch Basin North of 21V1	Add Water	Add Water	Water Added	10/10/2011
4	14	377	10/3/2011	Junction Box North of 14V6	Secure Lid	Secure Lid	Lid Secured	10/6/2011
4	14	646	10/3/2011	Junction Box 20 feet West of 11V43	Secure Lid	Secure Lid	Lid Secured	10/17/2011
5	34	386	10/4/2011	Lift Station East of Tank 129	Secure Lid	Secure Lid	Lid Secured	10/6/2011
5	34	566	10/4/2011	Manway Southwest of Tank 116 (MH #2)	Secure Lid	Secure Lid	Lid Secured	10/6/2011
1	29	815	10/5/2011	Junction Box North of API Forebay	Secure Lid	Secure Lid	Lid Secured	10/19/2011
5	34	386	10/10/2011	Lift Station East of Tank 129	Secure Lid	Secure Lid	Lid Secured	10/19/2011
3	11	580	10/10/2011	Junction Box Southwest of Cooling Tower C in Roadway	Secure Lid	Secure Lid	Lid Secured	10/12/2011
1	5	761	10/11/2011	Junction Box 6 feet West of 4E38A	Secure Lid	Secure Lid	Lid Secured	10/17/2011
1	5	056	10/12/2011	Drain Northeast of 5P5B	Add Water	Add Water	Water Added	10/13/2011
2	7	309	10/20/2011	Funnel Drain at 7P102A	Install Plug	Install Plug	Plug Installed	10/26/2011
4	19	260	10/24/2011	Drain at KHT Reflux Pump (19P3B)	Add Water	Add Water	Water Added	10/31/2011
5	1	764	10/26/2011	Manhole East of Tank 53 in Dike	Repair Leak	Repair Leak	Leak Repaired	11/3/2011
1	5	059	11/2/2011	Drain West of 5P4A	Add Water	Add Water	Water Added	11/10/2011
2	7	309	11/2/2011	Funnel Drain at 7P102A	Install Plug	Install Plug	Plug Installed	11/9/2011
4	14	424	11/7/2011	Drain at SR Fuel Drum 14V12	Add Water	Add Water	Water Added	11/14/2011
4	19	260	11/7/2011	Drain at KHT Reflux Pump (19P3B)	Add Water	Add Water	Water Added	11/14/2011
4	19	261	11/7/2011	Drain at KHT Reflux Pump (19P3A)	Add Water	Add Water	Water Added	11/14/2011
5	1	2180	11/9/2011	Water Draw Southwest Side of Tank 71	Tightened Bolt	Tightened Bolt	Bolt Tightened	11/16/2011
2	7	629	11/16/2011	Funnel Drain at 7V67	Add Water	Add Water	Water Added	11/23/2011
4	16	494	11/14/2011	Drain 12 Feet South of 27V21	Install Plug	Install Plug	Plug Installed	11/22/2011
1	29	721	11/28/2011	Junction Box North of Tank 33	Replace Bolt	Replace Bolt	Bolt Replaced	12/5/2011
4	14	673	11/22/2011	Drain near East end of SR BFW Turbine 14P1A	Add Water	Add Water	Water Added	11/28/2011
1	29	N/A	12/6/2011	DEPT Hatches	Tightened Hatch	Tightened Hatch	Hatch Tightened	12/12/2011
4	16	494	12/6/2011	Drain 12 Feet South of 27V21	Install Plug	Install Plug	Plug Installed	12/13/2011
1	4	041	12/7/2011	Drain 8 Feet Southeast of 4E8	Add Water	Add Water	Water Added	12/15/2011
1	4	681	12/7/2011	Drain 6 Feet Southeast 4P4A	Add Water	Add Water	Water Added	12/21/2011
2	7	629	12/7/2011	Funnel Drain at 7V67	Install Plug	Install Plug	Plug Installed	12/14/2011
2	43	606	12/7/2011	Drain at Southeast End of 43V103	Add Water	Add Water	Water Added	12/14/2011
4	19	260	12/13/2011	Drain at KHT Reflux Pump (19P3B)	Add Water	Add Water	Water Added	12/19/2011



**Table 4**  
**Wastewater System Monitoring - Fourth Quarter 2011**  
**Michigan Refining Division**

Complex	Unit	Tag ID	Date	Service/Description	First Attempt	Recommended Fix	Final Repair	Final Repair Date
4	19	261	12/13/2011	Drain at KHT Reflux Pump (19P3A)	Add Water	Add Water	Water Added	12/19/2011
2	7	309	12/14/2011	Funnel Drain at 7P102A	Install Plug	Install Plug	Plug Installed	12/20/2011
1	4	696	12/15/2011	Drain South of 4P4A	Add Water	Add Water	Water Added	12/20/2011
1	29	N/A	12/21/2011	DEPT Hatches	Tightened Hatch	Tightened Hatch	Hatch Tightened	12/22/2011
3	12-21	878	12/27/2011	Drain 3 Feet West of 12P144	Add Water	Add Water	Water Added	1/2/2012
4	19	260	12/27/2011	Drain at KHT Reflux Pump (19P3B)	Add Water	Add Water	Water Added	Ongoing
4	19	261	12/27/2011	Drain at KHT Reflux Pump (19P3A)	Add Water	Add Water	Water Added	Ongoing
2	8	875	12/29/2011	Junction Box 40 Feet Northeast of 8H1	Install Cover	Install Cover	Cover Installed	1/13/2012

**Table 5**  
**NSR Consent Decree Information Paragraphs 20B and 18P - Fourth Quarter 2011**  
**Michigan Refining Division**

Measures that MPC took during the 4th Quarter 2011 to satisfy the provisions of Paragraph 20B and 18P(ii)(b) of the NSR Consent Decree:

Subparagraph	Requirement	Measures taken
20Bi	Training for personnel newly-assigned to LDAR	Greg Shay completed training in July 2009 for LDAR.
20Bii	Annual training for regular LDAR personnel	Regular LDAR work is contracted through Emissions Monitoring Service, Inc (EMSI Inc.) and Seal-Tech. EMSI and Seal-tech trains all personnel, training records are kept on-site.
20Biii	Training for Ops/Maint personnel	Refinery employees are required to complete a yearly Environmental Awareness CBT (Computer Based Training) module. This module, includes training information on the LDAR Program, was initiated on March 12, 2002. Additionally, contractors are required to attend a safety orientation on a yearly basis which includes information on the LDAR Program.
18P(ii)(b)	Laboratory Audits	The Detroit Refinery now has the ability to use RAD, ESC Labs of Nashville, TN, and Bureau Veritas of Livonia, MI to run all BWON samples. The Detroit Refinery began using ESC Labs of Nashville, TN on June 22, 2010.
18P(ii)(b)	Training	Affected Refinery employees are required to complete a yearly Benzene Sampling CBT (Computer Based Training) module. This module, includes training information on the Benzene NESHAP Program, was initiated on August 2002.
18P(ii)(b)	EOL Sampling Results	The EOL Sampling program was approved on March 8, 2010 for the Detroit Refinery. See Table 9 for EOL calculations.

**Table 6**  
**NSR Consent Decree Information Paragraph 200iic(2) - Fourth Quarter 2011**  
**Michigan Refining Division**

Complex	Unit	Description	Month monitored	# valves monitored	# pumps monitored	# compressors monitored	GGG # components leaking/quarter	GGGa # components leaking/quarter	# DTM components	Projected month of next monitoring
1	4	Vacuum Unit	Dec-11	464	5	2	na	1	2	Mar-12
	5	Crude Unit	Dec-11	2,244	32	0	2	na	15	Mar-12
	29	Wastewater Plant	Oct-11	726	16	0	na	3	0	Jan-12
2	7	Distillate Hydrotreater Unit	Dec-11	1,259	20	3	2	na	21	Mar-12
	8	Gas Oil Hydrotreater Unit	Nov-11	1,529	5	2	0	na	27	Feb-12
	9	Alkylation Unit	Oct-11	2,026	29	1	10	na	35	Jan-12
3	11	Fluid Catalytic Cracking Unit	Dec-11	454	6	0	1	na	18	Mar-12
	12/21	Gas Con/SATS Depropanizer	Nov-11	1,961	27	2	7	na	16	Feb-12
	13	Propylene Unit	Dec-11	691	9	3	9	na	4	Mar-12
4	14	Continuous Catalytic Reforming Unit	Oct-11	2,032	14	2	5	na	31	Jan-12
	16	Naphtha Hydrotreater Unit	Nov-11	1,416	23	0	na	22	41	Feb-12
	19	Kerosene Hydrotreater Unit	Oct-11	679	8	1	na	2	0	Jan-12
5	1	Crude Tank Farm	Nov-11	823	24	0	0	na	6	Feb-12
	2	LPG Tank Farm	Dec-11	2,145	20	0	16	na	10	Mar-12
	3/4	CP/Melvindale Tank Farms	Oct-11	1,505	26	0	1	na	9	Jan-12
		Light Product Terminal	Oct-11	806	15	0	0	na	0	Nov-12

GGG/GGGa leaking component counts includes; valves, pumps and compressors.

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHA - Fourth Quarter 2011**  
**Michigan Refining Division**

Revised stream/equipment name/status	Required monitoring/inspections	Inspection Status	Monitoring/ inspection rule	Equipment Classification	Note No.	Visual	Method 21*
SR Platformer Aromatics Sump (aka CP Sump)	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Piping from the CP Sump to the CP Flare Secondary Knockout Drum (25V2)	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
CP Sump Line from 14P10 to Sour Water Collection Tank (11V25) and Low Pressure Receiver (11V4)	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
CP Flare Knockout Drums - Primary (25V1) and Secondary (25V2)	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Piping from CP Flare Knockout Drums to the Stop Tanks 23/508 or the Low Pressure Receiver (11V4)	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from Alky Spent Caustic Holding Tank (9V31) to Alky Flare Knockout Drum (9V38)	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for		61.349(f)			X	
Piping from Spent Caustic Drum (21V47) to CP Flare	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Piping from Relief Valve of Merox System to CP Flare	Do not need to monitor or inspect this piping since it's now going to the flare system. Point of generation is the Flare Knockout Drum discharge.	--	N/A	--			
Piping from Disulfide Separator (21V33 or #3 Merox) to Stop Tanks 23/508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Tanks 508 and 23	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHA - Fourth Quarter 2011**  
**Michigan Refining Division**

Piping from Tank 507 to Slop Tanks 508 and 23	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Gravity Drum near Tank 507 (gravity drum near Tank 59 is currently out of service)	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for		61.343(c)		X		
Tanks 29T40 and 29T41 (Permitted as QQQ tanks with external floating roofs)	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)		X		
Piping from API separator to Tanks 29T40/41	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Piping from Tanks 29T40/41 to Slop Tanks 23 and 508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Piping from Unifiner, Alkylation, GOHT, and Crude Flare Knock-Out Drums to Tanks 23 and 508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Vacuum Trucks	The cover and all openings (e.g., bungs, hatches, and sampling ports) must be monitored initially and annually for NDE.	Conducted 2nd Quarter 2011	61.345(a)(1)(i)	Containers			X
	Each cover and all openings shall be visually inspected initially and quarterly to ensure that they are closed and gasketed properly.	Completed	61.345(b)	Containers		X	
Piping from NHT Particulate Filter Relief to Refinery Slop System	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Piping from the Disulfide Off-Gas Knockout Drum (12V36) to Refinery Slop System	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHAP - Fourth Quarter 2011**  
**Michigan Refining Division**

Piping from the West Plant Slop System to Slop Tanks 23/508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping associated with the carbon canister stations	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Carbon Canisters	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each control device shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Water Draw Covers This includes tanks in the Crude tank farm (6, 36, 39, 40, 41, 45, 46, 47, 48, 49, 53, 61, 72), CP Tank Farm (21, 57), and Melvindale Tank Farm (102, 103, 104, 105, 106, 107, etc).	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
CP Flare	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each control device shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Piping from Tank 507 to the Benzene Stripper Column	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Benzene Stripper Column (5V36)	The cover and all openings (e.g., access hatches, sampling ports, etc) must be monitored initially and annually for NDE.	Completed	61.348(a)(2)	Treatment Processes			X
	Each seal, access door, and all other openings shall be visually inspected initially and quarterly to ensure that no cracks or gaps occur and all openings are closed and gasketed properly.		61.348(e)(1)			X	
Piping from the top of the Benzene Stripper Column (5V36) to the Overhead Condensers (5E41A/B) and to the Overhead Receiver (5V37)	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Benzene Stripper overhead condensers (5E41A/B)	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Piping from the Crude Desalters (5V31/32) to the Benzene Stripper Column (5V36)	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Piping from the Benzene Stripper (5V36) to the Brute Force System	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Brute Force System	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHA - Fourth Quarter 2011**  
**Michigan Refining Division**

Tank 507	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Piping from the Benzene Stripper Overhead Receiver (5V37) to the Crude Desalters	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
API separator, forebay, and associated equipment	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.347(a)(1)(i)(A)	Oil-Water separators			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly to ensure that no cracks or gaps occur between the cover and oil-water separator wall and that access hatches and other openings are closed and gasketed properly.		61.347(b)			X	
Piping from Gravity Drum near Tank 507 to Stop Tanks 23 and 508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping at Gravity Drum near Tank 507 and piping at Tank 508 used for Vacuum Truck Operations (Gravity Drum near Tank 59 currently out of service).	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from Tank 51 to Stop Tank 23/508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Tank 51/52	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Piping from Tank 52 to Stop Tanks 23/508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from CP Flare Secondary Knockout Drum to CP Flare	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHAP - Fourth Quarter 2011**  
**Michigan Refining Division**

Piping on Hydrocarbon/Liquid Line from CP Sump to FCCU Low Pressure Receiver or Refinery Slop System.	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from CP Flare Knockout Drums to the FCCU High and Low Pressure Slop Header	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from CP Sump to FCCU High and Low Pressure Slop Header	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from FCCU High Pressure Slop Header to High Pressure Slop Bullets	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from FCCU Low Pressure Slop Header to Low Pressure Slop Bullets	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
High and low pressure slop bullets	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Aboveground Sewer Lines from Melvindale or Crude Tank Farms to Tank 507	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from the Marketing Terminal Sewer to Slop Tanks 23/508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	



**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHA - Fourth Quarter 2011**  
**Michigan Refining Division**

Truck Drain Downs at Terminal Loading Rack	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System		X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X
Aboveground piping from Truck Drain Downs to NESHA Sump	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System		X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X
Terminal NESHA Sump	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks		X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X
Tank 29T47	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks		X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X
All piping To and From 29T47	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System		X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X
Piping from Spent Caustic Tank (9V10) to New Caustic Pot (9T29)	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System		X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X
Spent Caustic Pot 9T29	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks		X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X
Tank Cleanouts	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System		X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X
Railcars (when applicable to BWON)	The cover and all openings (e.g., bungs, hatches, and sampling ports) must be monitored initially and annually for NDE.	Conducted 2nd Quarter 2011	61.345(a)(1)(i)	Containers		X
Frac Tanks (when applicable to BWON)	Each cover and all openings shall be visually inspected initially and quarterly to ensure that they are closed and gasketed properly.	Completed	61.345(c)	Containers		X
	The cover and all openings (e.g., bungs, hatches, and sampling ports) must be monitored initially and annually for NDE.	Completed	61.345(a)(1)(i)	Containers		X
	Each cover and all openings shall be visually inspected initially and quarterly to ensure that they are closed and gasketed properly.	Completed	61.345(c)	Containers		X

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHAP - Fourth Quarter 2011**  
**Michigan Refining Division**

Slop Oil Drums	The cover and all openings (e.g., bungs, hatches, and sampling ports) must be monitored initially and annually for NDE.	Completed Monthly	61.345(a)(1)(i)	Containers			X
	Each cover and all openings shall be visually inspected initially and quarterly to ensure that they are closed and gasketed properly.		61.345(b)	Containers		X	
All piping to Lab Slop Oil Tank	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Lab Slop Tank	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Piping at API Separator used for Vacuum Truck Operations	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from Slop Tanks 23/508 to Crude Unit	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from Complex 1 Flare Knockout Drum to the Crude Flare.	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Crude Flare Itself	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each control device shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Piping from the Propane Caustic Scrubber 9V22 to Alky Spent Caustic Holding Tank 9V31	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from the Alky Spent Caustic Holding Tank 9V31 used for Vacuum/Tank Trucks Operations	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Unifiner Flare Knockout Drum	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for evidence of visible defects.		61.343(c)			X	
Piping from the Unifiner Flare Knockout Drum to the Unifiner Flare	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Unifiner Flare Itself	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each control device shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHA - Fourth Quarter 2011**  
**Michigan Refining Division**

GOHT Flare Knockout Drum	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for Must be monitored initially and annually for NDE.		61.343(c) 61.349(a)(1)(i)			X	
Piping from the GOHT Flare Knockout Drum to the Unifiner Flare	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.	Completed	61.349(f)	Closed Vent System		X	
Alky Flare Knockout Drums	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and Must be monitored initially and annually for NDE.		61.343(c) 61.349(a)(1)(i)			X	
Piping from the Alky Flare Knockout Drums to the Alky Flare	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.	Completed	61.349(f)	Closed Vent System		X	
Alky Flare Itself	Must be monitored initially and annually for NDE.		61.349(a)(1)(i)				X
	Each control device shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.	Completed	61.349(f)	Control Devices		X	
Piping from Caustic Wash Drum (9V10) to Spent Caustic Pot (9T29)	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from SWS Feed Surge Drum to Stop Tanks 23/508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Vacuum Truck Operations at Spent Caustic Tank 21T47	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from the CP Primary Flare Knockout Drum 25V1 to the Secondary Knockout Drum 25V2	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from Disulfide Separator (21V33 or #3 Merox) to Spent Caustic Tank 21T47	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from the Caustic Scrubber (12V5) to Stop Tanks 23/508	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHAP - Fourth Quarter 2011**  
**Michigan Refining Division**

Piping from the P.P Caustic Wash Tower (13V1A/B) to Spent Caustic Tank (21T47)	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Spent Caustic Tank 21T47	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Piping from the Debutanizer Overhead Receiver 14V7/Water KO Pot to Aromatic Sump	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from the Fuel Gas Coalescers to Aromatic Sump	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from Low/High Pressure Strip Bullets to LPG Knockout Pot 22-1V5	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
LPG Knockout Drum	The cover and all openings (e.g., access hatches, sampling ports, and gauge wells) must be monitored initially and annually for NDE.	Completed	61.343(a)(1)(i)(A)	Tanks			X
	Each fixed-roof, seal, access door, and all other openings shall be visually inspected for indications of cracks, gaps, or other problems that could result in benzene emissions, and that access doors and all other openings are closed and gasketed properly.		61.343(c)			X	
Piping from LPG Knockout Pot to Unifiner Knockout Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Piping from the Terminal NESHAP Sump to VRU or Combustor	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
VRU and Combustor	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each control device shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
Fugitive Emissions Eliminator	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each control device shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	
RVP Analyzer	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)			X	

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHA - Fourth Quarter 2011**  
**Michigan Refining Division**

New Vacuum Truck Hookup at API Skim Pit	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)		X		
Piping from Spent Caustic Pot (9T29) to Vacuum Truck Hookup	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Control Devices			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)		X		
Piping from RVP Analyzer Sample to Fugitive Emissions Eliminator	Must be monitored initially and annually for NDE.	Completed	61.349(a)(1)(i)	Closed Vent System			X
	Each closed vent system shall be visually inspected initially and quarterly. Inspection shall include inspection of ductwork, piping, connections to covers and control device for evidence of visible defects.		61.349(f)		X		
Piping from the MVGO Filter Changeouts to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result		61.346(a)(2)		X		
Piping from the HVGO Filter Changeouts to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result		61.346(a)(2)		X		
Piping from the LVGO Filter Changeouts to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result		61.346(a)(2)		X		
Piping from the AGO Filter Changeouts to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Compressor Lube Oil Filter Changeouts (7C2) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Compressor Lube Oil Filter Changeouts (8V31A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Compressor Lube Oil Filter Changeouts (8V30A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result		61.346(a)(2)		X		
Lube Oil Filter Changeouts (9V45A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result		61.346(a)(2)		X		
Hydraulic Oil Filter Changeouts to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHA - Fourth Quarter 2011**  
**Michigan Refining Division**

Slurry Stripper Bottoms Strainer Changeouts to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Strainer Changeouts (12V47/48) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Lube Oil Filter Changeouts (11V46A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
#6 Gas Lube Oil Filter Changeouts (12V54/55) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Lube Oil Filter Changeouts (12V45A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Lean Amine Filter Changeouts (12V45) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Lean Amine Surge Drum (12V9) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Trim Compressor Lube Oil Filter Changeouts (13V15) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Trim Compressor Lube Oil Filter Changeouts (13V9) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Lube Oil Filter Changeouts (14ME10A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		
Lube Oil Filter Changeouts (14ME12A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)		X		

**Table 7**  
**Inspection Certification required under 40 CFR 61.537 (d) (6) Benzene Waste NESHAP - Fourth Quarter 2011**  
**Michigan Refining Division**

Compressor Cylinder Oil Filter Changeouts (14ME18A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
Compressor Lube Oil Filter Changeouts (14ME17A/B) to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
NHT Naphtha Feed Filler Changeouts to Unit Area Slop Drum	The cover and all openings (e.g., access hatches, sampling ports) must be monitored initially and annually for NDE.	Completed	61.346(a)(1)(i)(A)	Individual Drain System			X
	Each cover seal, access hatch, and all other openings shall be visually inspected initially and quarterly thereafter to ensure that no cracks, gaps, or other problems that could result in benzene emissions occur and access hatches and other openings are closed and gasketed properly.		61.346(a)(2)			X	
API Separator Floating Roof Inspections	5 year primary seal, Annual secondary seal.	Completed	61.352(a)(1)	Alternative Standards for Oil-Water separators	2		

**Notes:**

1. Visual inspections carried out during November 2011
2. Secondary Seal was inspected during March 2011

\*Method 21 readings for valves are completed quarterly.

Table 8  
Exceedance Summary for Various Control Equipment or Treatment Processes  
Fourth Quarter 2011  
Michigan Refining Division

Equipment	Reporting Requirement	No. of Reportable Exceedances this Quarter	Regulation	Equipment Classification
Desalter Water Flash Column	Each period of operation during which the concentration of benzene is > or = to 10 ppm based upon monthly sampling of Desalter Water Flash Column effluent.	0	40 CFR 61.348(a)(1)(i) & 357(d)(7)(i)	Treatment Processes
Carbon Canisters	Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly on site in the control device is not replaced at the predetermined interval specified.	0	40 CFR 61.357(d)(7)(iv)(i)	Closed Vent System or Control Device
		0	40 CFR 60.692-5(e)(5)	Closed Vent System or Control Device
Water Draw covers	All water draw covers associated with NESHAP program should be tightly sealed. This includes tanks in the Crude tank farm (8, 38, 39, 40, 41, 45, 46, 47, 48, 49, 53, 61, 72), CP Tank Farm (21, 57), and Melvindale Tank Farm (102, 103, 104, 105, 106, 107, 120, 125, 128, 127, 128, 133, 134, 112, 113, 114, 115, 129, 130, 176, 108, 109, 110, 116)	3	61.349(f)	Closed Vent System
Inspections <sup>1</sup>	Summarizes all inspections required by 61.342 through 61.354 during which detectable emissions are measured or a problem (such as a broken seal, etc.) that could result in benzene emissions, including information about the repairs or corrective action taken.	39	61.357(d)(8)	See Table 7
CP Flare	Each period in which the pilot flame of a flare is absent.	0	40 CFR 61.357(d)(7)(iv)(F)	Closed Vent System or Control Device
Unifiner Flare	Each period in which the pilot flame of a flare is absent.	0	40 CFR 61.357(d)(7)(iv)(F)	Closed Vent System or Control Device
Alkylalation Flare	Each period in which the pilot flame of a flare is absent.	0	40 CFR 61.357(d)(7)(iv)(F)	Closed Vent System or Control Device
Crude Flare	Each period in which the pilot flame of a flare is absent.	0	40 CFR 61.357(d)(7)(iv)(F)	Closed Vent System or Control Device
Vapor Recovery Unit	Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a thermal vapor incinerator, as measured by the temperature monitoring device is more than 28 °C (50 °F) below the design combustion zone temperature.	0	40 CFR 61.357(d)(7)(iv)(A)	Closed Vent System or Control Device
Combustor	Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a boiler or process heater having a design heat input capacity less than 44 MW, as measured by the temperature monitoring device, is more than 28 °C (50 °F) below the design combustion zone temperature.	0	40 CFR 61.357(d)(7)(iv)(C)	Closed Vent System or Control Device
Fugitive Emissions Eliminator	Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly on site in the control device is not replaced at the predetermined interval specified.	0	40 CFR 61.357(d)(7)(iv)(i)	Closed Vent System or Control Device

Note: 1. Inspections include valves and flanges that had NDE reading above 500 ppm. If deficiencies are noted, an attached summary sheet will be included.





MARATHON - DETROIT  
1300 SOUTH FORT STREET  
DETROIT, MI 48217

01/12/2012

## LEAKING EQUIPMENT LOG

Program: NESHAPS-FF

Reporting Period 10/01/2011 - 12/31/2011

### Process Unit : 01

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
1698	VALVE	6.00	NW SIDE TK53 WaTER draw								
				11/02/2011	M21	569 PPM	VLV-SEL	11/02/2011	ATSC	1129.00	
				11/02/2011	M21	1129 PPM		11/03/2011	VLV-CL	2.00	
				11/03/2011	M21	2 PPM					11/03/2011

#### Process Unit 01 Summary

	Component Count	Leak Count
Total in Group	1	1
Total Valves	1	1
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2324	VALVE/ CTRL	4.00	DOT LINE S SIDE OF TK98 40FT.N OF TORONTO RDWY. CV MOV 16A.	10/18/2011	M21	160800 PPM	VLV-PKG	10/18/2011	VLV-CL	46200.00	
				10/18/2011	M21	46200 PPM		10/28/2011	VLV-TP	201.00	
				10/28/2011	M21	201 PPM					10/28/2011
2326	VALVE/ TWIN SEAL	3.00	DOT LINE S SIDE OF TK98 40FT.N OF TORONTO RDWY. N OF CV MOV 16A	12/15/2011	M21	701 PPM	VLV-PKG	12/15/2011	VLV-CP	879.00	
				12/15/2011	M21	879 PPM		12/22/2011	VLV-TP	23.00	
				12/22/2011	M21	23 PPM					12/22/2011
2350.04	CONNECTOR/ SCREWED	1.00	DOT LINE S SIDE OF 22P51 10FT.	12/15/2011	M21	698 PPM	CON-90	12/15/2011	CON-CLA	248.00	
				12/15/2011	M21	248 PPM					12/15/2011
2366	VALVE/ BALL	3.00	15FT SW OF TK98 @UG-5-009 DOT LINE	10/18/2011	M21	5750 PPM	VLV-BON	10/18/2011	VLV-CP	29300.00	
				10/18/2011	M21	29300 PPM		10/28/2011	VLV-TBO N	152.00	
				10/28/2011	M21	152 PPM					10/28/2011
2366	VALVE/ BALL	3.00	15FT SW OF TK98 @UG-5-009 DOT LINE	12/16/2011	M21	13100 PPM	VLV-BON	12/16/2011	VLV-CL	10400.00	
				12/16/2011	M21	10400 PPM		12/22/2011	VLV-TP	19.00	
				12/22/2011	M21	19 PPM					12/22/2011
2383A	VALVE/ CHECK	6.00	3FT NW OF 22P51.NE OF CASING PRESSURE PANEL	12/16/2011	M21	2455 PPM	VLV-FLG	12/16/2011	VLV-CL	2504.00	
				12/16/2011	M21	2504 PPM		12/22/2011	VLV-TFL G	84.00	
				12/22/2011	M21	84 PPM					12/22/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2423.05	CONNECTOR/ 90	1.00	E OF 22P50.W OF STAIRS.								
				12/16/2011	M21	1346 PPM	CON-90	12/16/2011	CON-CLA	3683.00	
				12/16/2011	M21	3683 PPM		12/22/2011	CON-TC ON	5.00	
				12/22/2011	M21	5 PPM					12/22/2011
2423.06	CONNECTOR/ 90	1.00	E OF 22P50.W OF STAIRS.								
				09/20/2011	VIS	F	CON-CON NEC	09/20/2011	CON-CLA	9019.00	
				09/20/2011	M21	9019 PPM					
				09/20/2011	M21	14500 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	201 PPM					10/03/2011
2423.06	CONNECTOR/ 90	1.00	E OF 22P50.W OF STAIRS.								
				12/16/2011	M21	12600 PPM	CON-90	12/16/2011	CON-CLA	14500.00	
				12/16/2011	M21	14500 PPM		12/22/2011	CON-TC ON	75.00	
				12/22/2011	M21	75 PPM					12/22/2011
2423.07	CONNECTOR/ SCREWED	1.00	E OF 22P50.W OF STAIRS.								
				12/16/2011	M21	21600 PPM	CON-CON NEC	12/16/2011	CON-CLA	21400.00	
				12/16/2011	M21	21400 PPM		12/22/2011	CON-TC ON	52.00	
				12/22/2011	M21	52 PPM					12/22/2011
2423.08	CONNECTOR/ UNION	1.00	E OF 22P50.W OF STAIRS.								
				12/16/2011	M21	2206 PPM	CON-UNIO N	12/16/2011	CON-CLA	1314.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				12/16/2011	M21	1314 PPM		12/22/2011	CON-TC ON	49.00	
				12/22/2011	M21	49 PPM					12/22/2011
2423.09	CONNECTOR/ SCREWED	1.00	E OF 22P50.W OF STAIRS.								
				12/16/2011	M21	518 PPM	CON-CON NEC	12/16/2011	CON-CLA	982.00	
				12/16/2011	M21	982 PPM		12/22/2011	CON-TC ON	50.00	
				12/22/2011	M21	50 PPM					12/22/2011
2423.12	CONNECTOR/ SCREWED	1.00	E OF 22P50.W OF STAIRS.								
				09/20/2011	VIS	F	CON-CON NEC	09/20/2011	CON-CLA	11200.00	
				09/20/2011	M21	11200 PPM					
				09/20/2011	M21	12300 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	147 PPM					10/03/2011
2423.12	CONNECTOR/ SCREWED	1.00	E OF 22P50.W OF STAIRS.								
				12/16/2011	M21	5394 PPM	CON-CON NEC	12/16/2011	CON-CLA	6092.00	
				12/16/2011	M21	6092 PPM		12/22/2011	CON-TC ON	88.00	
				12/22/2011	M21	88 PPM					12/22/2011
2424.06	CONNECTOR/ 90	1.00	E OF 22P50 @ PUMPSEAL								
				09/20/2011	VIS	F	CON-90	09/20/2011	CON-CLA	1105.00	
				09/20/2011	M21	1105 PPM					
				09/20/2011	M21	984 PPM		10/03/2011	CON-TC	0.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
ON											
				10/03/2011	VIS	P					
				10/03/2011	M21	312 PPM					10/03/2011
2424.06	CONNECTOR/ 90	1.00	E OF 22P50 @ PUMPSEAL								
				12/16/2011	M21	615 PPM	CON-90	12/16/2011	CON-CLA	868.00	
				12/16/2011	M21	868 PPM		12/22/2011	CON-TC ON	57.00	
				12/22/2011	M21	57 PPM					12/22/2011
2424.07	CONNECTOR/ SCREWED	1.00	E OF 22P50 @ PUMPSEAL								
				09/20/2011	VIS	F	CON-CON NEC	09/20/2011	CON-CLA	880.00	
				09/20/2011	M21	880 PPM					
				09/20/2011	M21	813 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	101 PPM					10/03/2011
2424.07	CONNECTOR/ SCREWED	1.00	E OF 22P50 @ PUMPSEAL								
				12/16/2011	M21	630 PPM	CON-CON NEC	12/16/2011	CON-CLA	675.00	
				12/16/2011	M21	675 PPM		12/22/2011	CON-TC ON	32.00	
				12/22/2011	M21	32 PPM					12/22/2011
2424.11	CONNECTOR/ TEE-FLG	1.00	E OF 22P50 @ PUMPSEAL								
				09/20/2011	VIS	F	CON-TEE	09/20/2011	CON-CLA	6610.00	
				09/20/2011	M21	6610 PPM					
				09/20/2011	M21	4204 PPM		10/03/2011	CON-TC	0.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
ON											
2424.11	CONNECTOR/ TEE-FLG	1.00	E OF 22P50 @ PUMPSEAL	10/03/2011	VIS	P					
				10/03/2011	M21	175 PPM					10/03/2011
				12/16/2011	M21	5322 PPM	CON-TEE	12/16/2011	CON-CLA	2445.00	
				12/16/2011	M21	2445 PPM		12/22/2011	CON-TC ON	72.00	
				12/22/2011	M21	72 PPM					12/22/2011
2424.12	CONNECTOR/ TEE-FLG	1.00	E OF 22P50 @ PUMPSEAL	09/20/2011	VIS	F	CON-TEE	09/20/2011	CON-CLA	14000.00	
				09/20/2011	M21	14000 PPM					
				09/20/2011	M21	14000 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	378 PPM					10/03/2011
2424.12	CONNECTOR/ TEE-FLG	1.00	E OF 22P50 @ PUMPSEAL	12/16/2011	M21	3804 PPM	CON-TEE	12/16/2011	CON-CLA	3390.00	
				12/16/2011	M21	3390 PPM		12/22/2011	CON-TC ON	17.00	
				12/22/2011	M21	17 PPM					12/22/2011
2424.13	CONNECTOR/ 90	1.00	E OF 22P50 @ PUMPSEAL	09/20/2011	VIS	F	CON-90	09/20/2011	CON-CLA	3800.00	
				09/20/2011	M21	3800 PPM					
				09/20/2011	M21	7510 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				10/03/2011	M21	108 PPM					10/03/2011
2424.13	CONNECTOR/ 90	1.00	E OF 22P50 @ PUMPSEAL								
				12/16/2011	M21	1427 PPM	CON-90	12/16/2011	CON-CLA	2986.00	
				12/16/2011	M21	2986 PPM		12/22/2011	CON-TC ON	42.00	
				12/22/2011	M21	42 PPM					12/22/2011
2428.10	CONNECTOR/ TEE-SCR	1.00	N OF 22P50.W OF STAIRS.								
				09/20/2011	VIS	F	CON-CON NEC	09/20/2011	CON-CLA	513.00	
				09/20/2011	M21	513 PPM					
				09/20/2011	M21	945 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	81 PPM					10/03/2011
2428.11	CONNECTOR/ TEE-SCR	1.00	N OF 22P50.W OF STAIRS.								
				09/20/2011	VIS	F	CON-CON NEC	09/20/2011	CON-CLA	5074.00	
				09/20/2011	M21	5074 PPM					
				09/20/2011	M21	4556 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	101 PPM					10/03/2011
2428.11	CONNECTOR/ TEE-SCR	1.00	N OF 22P50.W OF STAIRS.								
				12/16/2011	M21	1848 PPM	CON-TEE	12/16/2011	CON-CLA	3022.00	
				12/16/2011	M21	3022 PPM		12/22/2011	CON-TC ON	87.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2429.01	CONNECTOR/ SCREWED	0.75	N OF 22P50.W OF STAIRS.	12/22/2011	M21	87 PPM					12/22/2011
				09/20/2011	VIS	F	CON-CON NEC	09/20/2011	CON-CLA	1109.00	
				09/20/2011	M21	1109 PPM					
				09/20/2011	M21	1446 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	51 PPM					10/03/2011
2459.01	CONNECTOR/ 90	1.00	12FT SE OF TK99. DOT LINE	12/16/2011	M21	2194 PPM	CON-90	12/16/2011	CON-CLA	2868.00	
				12/16/2011	M21	2868 PPM		12/22/2011	CON-TC ON	42.00	
				12/22/2011	M21	42 PPM					12/22/2011
2460.01	CONNECTOR/ SCREWED	1.00	12FT SE OF TK99. DOT LINE	12/16/2011	M21	16000 PPM	CON-CON NEC	12/16/2011	CON-CLA	15400.00	
				12/16/2011	M21	15400 PPM		12/22/2011	CON-TC ON	42.00	
				12/22/2011	M21	42 PPM					12/22/2011
2461.02	CONNECTOR/ SCREWED	0.75	12FT SE OF TK99. DOT LINE	12/16/2011	M21	2258 PPM	CON-CON NEC	12/16/2011	CON-CLA	6538.00	
				12/16/2011	M21	6538 PPM		12/22/2011	CON-TC ON	42.00	
				12/22/2011	M21	42 PPM					12/22/2011



## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2528	VALVE/ BALL	0.75	16FT SE OF TK191.DOT LINE.	12/19/2011	M21	960 PPM	VLV-PKG	12/19/2011	VLV-CL	2059.00	
				12/19/2011	M21	2059 PPM		12/22/2011	VLV-TP	45.00	
				12/22/2011	M21	45 PPM					12/22/2011
2639.01	CONNECTOR/ FLANGE	4.00	22P81 W OF TK 98. 2FT S OF PUMP.N FLANGE.	12/01/2011	M21	1376 PPM	CON-FLG	12/01/2011	CON-TFL G	625.00	
				12/01/2011	M21	625 PPM		12/02/2011	CON-TFL G	10.00	
				12/02/2011	M21	10 PPM					12/02/2011
2641.01	CONNECTOR/ FLANGE	4.00	22P81 W OF TK 98.S FLANGE	12/01/2011	M21	699 PPM	CON-FLG	12/01/2011	CON-TFL G	751.00	
				12/01/2011	M21	751 PPM		12/02/2011	CON-TFL G	64.00	
				12/02/2011	M21	64 PPM					12/02/2011
2645.01	CONNECTOR/ FLANGE	3.00	22P81 W OF TK 98.1FT N OF PUMP.S FLANGE.	12/01/2011	M21	1720 PPM	CON-FLG	12/01/2011	CON-CLA	3285.00	
				12/01/2011	M21	3285 PPM		12/02/2011	CON-TFL G	59.00	
				12/02/2011	M21	59 PPM					12/02/2011
2656.01	CONNECTOR/ FLANGE	3.00	UNDERNEATH TK99 IN MIDDLE .TOP FLANGE.	12/01/2011	M21	1803 PPM	CON-FLG	12/01/2011	CON-CLA	640.00	
				12/01/2011	M21	640 PPM		12/02/2011	CON-TFL G	91.00	
				12/02/2011	M21	91 PPM					12/02/2011
2657.03	CONNECTOR/ FLANGE	6.00	UNDERNEATH TK99 IN MIDDLE.N BTM FLANGE.								

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2657.03	CONNECTOR/ FLANGE	6.00	UNDERNEATH TK99 IN MIDDLE. N BTM FLANGE.								
				12/01/2011	M21	1843 PPM	CON-FLG	12/01/2011	CON-CLA	1402.00	
				12/01/2011	M21	1402 PPM		12/02/2011	CON-TFL G	68.00	
				12/02/2011	M21	68 PPM					12/02/2011
2659	VALVE/ ORBIT	4.00	UNDERNEATH TK190 NW SIDE. btw 99/190								
				12/01/2011	M21	870 PPM	VLV-PKG	12/01/2011	VLV-CL	2112.00	
				12/01/2011	M21	2112 PPM		12/02/2011	VLV-TP	6.00	
				12/02/2011	M21	6 PPM					12/02/2011
2666.02	CONNECTOR/ FLANGE	3.00	UNDERNEATH TK191 IN MIDDLE. BTM FLANGE.								
				12/01/2011	M21	923 PPM	CON-FLG	12/01/2011	CON-CLA	1204.00	
				12/01/2011	M21	1204 PPM		12/02/2011	CON-TFL G	48.00	
				12/02/2011	M21	48 PPM					12/02/2011
2667	VALVE/ GLOBE	4.00	UNDERNEATH TK191 IN MIDDLE.								
				12/01/2011	M21	797 PPM	VLV-PKG	12/01/2011	VLV-TP	1543.00	
				12/01/2011	M21	1543 PPM		12/02/2011	VLV-TP	54.00	
				12/02/2011	M21	54 PPM					12/02/2011
2782.03	CONNECTOR/ 45	0.75	BTM OF TK 191 N SIDE.								
				12/01/2011	M21	1417 PPM	CON-SCR	12/01/2011	CON-CLA	1781.00	
				12/01/2011	M21	1781 PPM		12/02/2011	CON-TIG	3.00	
				12/02/2011	M21	3 PPM					12/02/2011
2826.01	CONNECTOR/ FLANGE	3.00	N SIDE OF TK 99 @ BTM. TOP FLANGE.								
				12/01/2011	M21	2375 PPM	CON-FLG	12/01/2011	CON-CLA	957.00	
				12/01/2011	M21	957 PPM		12/02/2011	CON-TFL G	210.00	
				12/02/2011	M21	210 PPM					12/02/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
2866.01	CONNECTOR/ FLANGE	3.00	BTWN TK 99 & 98. N SIDE S OF LADDER. BTM FLANGE.	09/21/2011	VIS	F	CON-FLG	09/21/2011	CON-CLA	13600.00	
				09/21/2011	M21	13600 PPM		09/21/2011	CON-CLA	14800.00	
				09/21/2011	M21	14800 PPM		09/22/2011	CON-TFL G	1800.00	
				09/22/2011	M21	1800 PPM					
				09/22/2011	VIS	P		10/03/2011	CON-TFL G	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	75 PPM					10/03/2011
2875.01	CONNECTOR/ FLANGE	3.00	N SIDE OF TK98 @ BTM. TOP FLANGE.	12/01/2011	M21	16100 PPM	CON-FLG	12/01/2011	CON-CLA	32900.00	
				12/01/2011	M21	32900 PPM		12/01/2011	CON-TFL G	26.00	
				12/01/2011	M21	26 PPM					12/01/2011
3019.01	CONNECTOR/ PLUG	1.00	2FT SW OF TK 89 1FT NE OF PUMP 22-P-36	12/01/2011	VIS	F	CON-CON NEC	12/01/2011	CON-CLA	517.00	
				12/01/2011	M21	517 PPM					
				12/01/2011	M21	529 PPM		12/01/2011	CON-TPL G	4.00	
				12/01/2011	M21	4 PPM					
				12/01/2011	VIS	P					12/01/2011
3023.03	CONNECTOR/ PLUG	0.50	3FT W OF TK 89 3FT N OF PUMP 22-P-36	12/01/2011	VIS	F	CON-CON NEC	12/01/2011	CON-CLA	810.00	
				12/01/2011	M21	810 PPM					

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				12/01/2011	M21	1558 PPM		12/01/2011	CON-TPL G	42.00	
				12/01/2011	M21	42 PPM					
				12/01/2011	VIS	P					12/01/2011
3373.02	CONNECTOR	0.75	BTM SEDD OF BULLET 94 10FT E OF BULLET 93 TOP OF S/G								
				12/02/2011	M21	1028 PPM	CON-SCR	12/02/2011	CON-CLA	1651.00	
				12/02/2011	M21	1651 PPM		12/07/2011	CON-TC ON	54.00	
				12/07/2011	M21	54 PPM					12/07/2011
3406.06	CONNECTOR	0.25	SSD OF BULLET 93 1FT SW OF TANK ON SMPL STATION 10FT E OF BULLET 92								
				12/02/2011	M21	2667 PPM	CON-TUB	12/02/2011	CON-TC ON	1843.00	
				12/02/2011	M21	1843 PPM		12/07/2011	CON-TC ON	3.00	
				12/07/2011	M21	3 PPM					12/07/2011
3732.03	CONNECTOR	0.75	MDL OF RAIL LOADING RACKS ON 1ST PLTFM								
				09/29/2011	VIS	F	CON-SCR	09/29/2011	CON-CLA	836.00	
				09/29/2011	M21	836 PPM					
				09/29/2011	M21	983 PPM		10/03/2011	CON-CLA	0.00	
				10/03/2011	VIS	P					
				10/03/2011	M21	39 PPM					10/03/2011
3797	VALVE/ PSV	0.75	IN PIPERACK 17FT SW OF 22P88 ON HP OUTSIDE SLOP LINE.								
				12/02/2011	M21	549 PPM	VLV-SCR	12/02/2011	VLV-CL	683.00	
				12/02/2011	M21	683 PPM		12/07/2011	VLV-CL	3600.00	
				12/07/2011	M21	3600 PPM		12/07/2011	VLV-CL	1.00	
				12/16/2011	M21	1 PPM		12/16/2011	VLV-BOX		12/16/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
3797.02	CONNECTOR/ SCREWED	1.00	IN PIPERACK 17FT SW OF 22P88 ON HP OUTSIDE SLOP LINE.								
				09/28/2011	VIS	F	CON-CON NEC	09/28/2011	CON-WO	3542.00	
				09/28/2011	M21	3542 PPM					
				09/28/2011	M21	2021 PPM		10/04/2011	CON-TC ON	0.00	
				10/04/2011	VIS	P					
				10/04/2011	M21	18 PPM					10/04/2011
3797.03	CONNECTOR/ COUPLING	0.75	IN PIPERACK 17FT SW OF 22P88 ON HP OUTSIDE SLOP LINE.								
				09/28/2011	VIS	F	CON-CON NEC	09/28/2011	CON-WO	4916.00	
				09/28/2011	M21	4916 PPM					
				09/28/2011	M21	4661 PPM		10/04/2011	CON-TC ON	0.00	
				10/04/2011	VIS	P					
				10/04/2011	M21	9 PPM					10/04/2011
3962.02	CONNECTOR/ TUBCON	0.50	ON PUMP 22P87 FROM SEAL @ VLV 10' W OF TK80								
				12/06/2011	M21	80900 PPM	CON-CON NEC	12/06/2011	CON-CLA	59200.00	
				12/06/2011	M21	59200 PPM		12/08/2011	CON-TC ON	271.00	
				12/08/2011	M21	271 PPM					12/08/2011
3962.03	CONNECTOR/ TUBCON	0.50	ON PUMP 22P87 FROM SEAL @ TEE 10' W OF TK80								
				12/06/2011	M21	116400 PPM	CON-CON NEC	12/06/2011	CON-CLA	40000.00	
				12/06/2011	M21	40000 PPM		12/08/2011	CON-TC ON	125.00	
				12/08/2011	M21	125 PPM					12/08/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
3962.04	CONNECTOR/ TUBCON	0.50	ON PUMP 22P87 FROM SEAL @ TEE 10' W OF TK80	12/06/2011	M21	1986 PPM	CON-CON NEC	12/06/2011	CON-CLA	837.00	
				12/06/2011	M21	837 PPM		12/08/2011	CON-TC ON	256.00	
				12/08/2011	M21	256 PPM					12/08/2011
3962.05	CONNECTOR/ TUBCON	0.50	ON PUMP 22P87 FROM SEAL @ TEE 10' W OF TK80	12/06/2011	M21	769 PPM	CON-CON NEC	12/06/2011	CON-CLA	1509.00	
				12/06/2011	M21	1509 PPM		12/08/2011	CON-TC ON	52.00	
				12/08/2011	M21	52 PPM					12/08/2011
3977	VALVE/ ORBIT	4.00	PUMP 22P86 SUCTION LINE 12' W OF TK80	12/06/2011	M21	19500 PPM	VLV-PKG	12/06/2011	VLV-CL	12900.00	
				12/06/2011	M21	12900 PPM		12/08/2011	VLV-TP	39.00	
				12/08/2011	M21	39 PPM					12/08/2011
3998	VALVE/ ORBIT	3.00	PUMP 22P85 ON SUCTION LINE W OF TK80	12/06/2011	M21	1353 PPM	VLV-CAP	12/06/2011	VLV-CL	2008.00	
				12/06/2011	M21	2008 PPM		12/08/2011	VLV-TCA P	5.00	
				12/08/2011	M21	5 PPM					12/08/2011
4027	VALVE/ ORBIT	6.00	S SIDE TK80 TOP blk	12/06/2011	M21	4789 PPM	VLV-PKG	12/06/2011	VLV-CL	3346.00	
				12/06/2011	M21	3346 PPM		12/08/2011	VLV-TP	46.00	
				12/08/2011	M21	46 PPM					12/08/2011
4052	VALVE/ ORBIT	6.00	S SIDE TK82 TOP BLK	12/06/2011	M21	2485 PPM	VLV-PKG	12/06/2011	VLV-CP	2864.00	
				12/06/2011	M21	2864 PPM		12/08/2011	VLV-TP	226.00	
				12/08/2011	M21	226 PPM					12/08/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
4061	VALVE/ ORBIT	6.00	S SIDE TK83 TOP BLK	12/06/2011	M21	10100 PPM	VLV-PKG	12/06/2011	VLV-CP	160600.00	
				12/06/2011	M21	160600 PPM		12/08/2011	VLV-TP	4.00	
				12/08/2011	M21	4 PPM					12/08/2011
4093.02	CONNECTOR/ FLANGE	3.00	N SIDE TK81 TOP BLDR	12/06/2011	M21	10400 PPM	CON-FLG	12/06/2011	CON-CLA	126300.00	
				12/06/2011	M21	126300 PPM		12/08/2011	CON-TFL G	81.00	
				12/08/2011	M21	81 PPM					12/08/2011
4197.01	CONNECTOR/ PLUG	0.50	TK 83 S SIDE OVHD TEMP MTR	12/06/2011	M21	53800 PPM	CON-CAP	12/06/2011	CON-CLA	48000.00	
				12/06/2011	M21	48000 PPM		12/06/2011	CON-CLA	25600.00	
				12/06/2011	M21	25600 PPM		12/08/2011	CON-TPL G	8.00	
				12/08/2011	M21	8 PPM					12/08/2011
4204.01	CONNECTOR/ PLUG	0.75	TK 83 S SIDE OVHD BLDR	12/06/2011	M21	3406 PPM	CON-CAP	12/06/2011	CON-CLA	2031.00	
				12/06/2011	M21	2031 PPM		12/08/2011	CON-TPL G	5.00	
				12/08/2011	M21	5 PPM					12/08/2011
4211.09	CONNECTOR/ 90	0.50	TK 83 S SIDE BTM BLK	12/06/2011	M21	936 PPM	CON-90	12/06/2011	CON-CLA	219.00	
				12/06/2011	M21	219 PPM					12/06/2011
4211.11	CONNECTOR/ COUPLING	0.50	TK 83 S SIDE BTM BLK	12/06/2011	M21	623 PPM	CON-SCR	12/06/2011	CON-CLA	234.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				12/06/2011	M21	234 PPM					12/06/2011
4211.12	CONNECTOR/ 45	0.50	TK 83 S SIDE BTM BLK								
				12/06/2011	M21	902 PPM	CON-CON NEC	12/06/2011	CON-CLA	3517.00	
				12/06/2011	M21	3517 PPM		12/08/2011	CON-TC ON	47.00	
				12/08/2011	M21	47 PPM					12/08/2011
4211.13	CONNECTOR/ 45	0.50	TK 83 S SIDE BTM BLK								
				12/06/2011	M21	9670 PPM	CON-CON NEC	12/06/2011	CON-CLA	5466.00	
				12/06/2011	M21	5466 PPM		12/08/2011	CON-TC ON	5.00	
				12/08/2011	M21	5 PPM					12/08/2011
4211.14	CONNECTOR/ REDUCER	0.50	TK 83 S SIDE BTM BLK								
				12/06/2011	M21	325600 PPM	CON-CAP	12/06/2011	CON-CLA	47200.00	
				12/06/2011	M21	47200 PPM		12/06/2011	CON-CLA	150000.00	
				12/06/2011	M21	150000 PPM		12/08/2011	CON-TCA	6.00	
				12/08/2011	M21	6 PPM					12/08/2011
4213	VALVE/ BALL CHECK	0.75	TK 83 S SIDE BTM BLK								
				10/18/2011	M21	12000 PPM	VLV-PLUG	10/18/2011	VLV-CL	16100.00	
				10/18/2011	M21	16100 PPM		10/20/2011	VLV-TPL G	43.00	
				10/20/2011	M21	43 PPM					10/20/2011
4221	VALVE/ ORBIT	6.00	TK 83 S SIDE BTM BLK UNDERNEATH								
				12/06/2011	M21	18800 PPM	VLV-PKG	12/06/2011	VLV-CL	84100.00	



## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
4243.03	CONNECTOR/ SCREWED	0.50	TK 82 S SIDE BTM BLK@SG	12/06/2011	M21	84100 PPM		12/08/2011	VLV-TP	27.00	
				12/08/2011	M21	27 PPM					12/08/2011
				09/24/2011	VIS	F	CON-CON NEC	09/24/2011	CON-CLA	112800.00	
				09/24/2011	M21	112800 PPM					
				09/24/2011	M21	94200 PPM		10/03/2011	CON-TC ON	0.00	
				10/03/2011	VIS	P					10/03/2011
4245.05	CONNECTOR/ PLUG	0.25	TK 82 S SIDE BTM DRAIN BLDR	12/06/2011	M21	29800 PPM	CON-CAP	12/06/2011	CON-CLA	43400.00	
				12/06/2011	M21	43400 PPM		12/08/2011	CON-TCA	21.00	
				12/08/2011	M21	21 PPM					12/08/2011
4246.03	CONNECTOR/ 90	0.75	TK 82 S SIDE BTM DRAIN BLDR	12/06/2011	M21	5340 PPM	CON-90	12/06/2011	CON-CLA	6934.00	
				12/06/2011	M21	6934 PPM		12/08/2011	CON-TC ON	52.00	
				12/08/2011	M21	52 PPM					12/08/2011
4246.05	CONNECTOR/ COUPLING	0.75	TK 82 S SIDE BTM DRAIN BLDR	12/06/2011	M21	1303 PPM	CON-CON NEC	12/06/2011	CON-CLA	1724.00	
				12/06/2011	M21	1724 PPM		12/08/2011	CON-TC ON	11.00	
				12/08/2011	M21	11 PPM					12/08/2011

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 02

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
4246.06	CONNECTOR/ COUPLING	0.75	TK 82 S SIDE BTM DRAIN BLDR	12/06/2011	VIS	F	CON-CON NEC	12/06/2011	CON-CLA	5392.00	
				12/06/2011	M21	5392 PPM					
				12/06/2011	M21	21700 PPM		12/08/2011	CON-TC ON	0.00	
				12/08/2011	VIS	P					
				12/08/2011	M21	122 PPM					12/08/2011
4246A.01	CONNECTOR/ SCREWED	0.75	TK 82 S SIDE BTM DRAIN BLDR @ BARREL	12/06/2011	VIS	F	CON-SCR	12/06/2011	CON-CLA	949.00	
				12/06/2011	M21	949 PPM					
				12/06/2011	M21	2149 PPM		12/08/2011	CON-TC ON	0.00	
				12/08/2011	VIS	P					
				12/08/2011	M21	209 PPM					12/08/2011
4246A.03	CONNECTOR/ 45	0.75	TK 82 S SIDE BTM DRAIN BLDR @ BARREL	12/06/2011	VIS	F	CON-CON NEC	12/06/2011	CON-CLA	727.00	
				12/06/2011	M21	727 PPM					
				12/06/2011	M21	1966 PPM		12/08/2011	CON-TC ON	0.00	
				12/08/2011	VIS	P					
				12/08/2011	M21	2 PPM					12/08/2011
4284	VALVE/ NEEDLE	0.25	TK 80 S SIDE OVHD TEMP MTR BLK	09/24/2011	M21	1913 PPM	VLV-SCR	09/24/2011	VLV-CL	1185.00	
				09/24/2011	M21	1185 PPM		10/03/2011	VLV-RV	21.00	
				10/03/2011	M21	21 PPM					10/03/2011

**Process Unit : 02**

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
4311A	VALVE/ CHECK	0.75	10FT W OF TK 80 S SIDE BTM BLDR	10/18/2011	M21	115000 PPM	VLV-SCR	10/18/2011	VLV-CL	34500.00	
				10/18/2011	M21	34500 PPM		10/18/2011	VLV-TCO N	97.80	
				10/18/2011	M21	97.8 PPM					10/18/2011

**Process Unit 02 Summary**

	Component Count	Leak Count
Total in Group	71	80
Total Valves	17	18
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	54	62
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 05

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
4590	VALVE/ GATE	4.00	L/1 E SIDE OF 5E45 FINFAN BY OLD CNTRL RM.								
				11/16/2011	VIS	F	VLV-PKG	11/16/2011	VLV-TP	775.00	
				11/16/2011	M21	775 PPM					
				11/16/2011	M21	615 PPM		11/17/2011	VLV-TP	30.00	
				11/17/2011	M21	30 PPM					
				11/17/2011	VIS	P					11/17/2011
4644	VALVE/ GATE	4.00	IN WALKWAY 25FT SE OF 5V5.								
				11/16/2011	VIS	F	VLV-BON	11/16/2011	VLV-CL	1287.00	
				11/16/2011	M21	1287 PPM					
				11/16/2011	M21	1091 PPM		11/17/2011	VLV-TBO N	1200.00	
				11/17/2011	M21	1200 PPM		11/18/2011	VLV-D&T	0.00	
				11/18/2011	VIS	P					
				11/18/2011	M21	146 PPM					11/18/2011

## Process Unit 05 Summary

	Component Count	Leak Count
Total in Group	2	2
Total Valves	2	2
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 14

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
30637	VALVE/ GATE	1.00	WATER BOOT 5FT W OF 14V6	10/05/2011	M21	3057 PPM	VLV-PLUG	10/05/2011	VLV-TPL G	2971.00	
				10/05/2011	M21	2971 PPM		10/07/2011	VLV-TPL G	16.00	
				10/07/2011	M21	16 PPM					10/07/2011

## Process Unit 14 Summary

	Component Count	Leak Count
Total in Group	1	1
Total Valves	1	1
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 34

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
5215	VALVE	6.00	SOUTH WEST SIDE OF TK108	11/15/2011	VIS	F	WTR DRW CA	11/15/2011	VLV-TCA P	1997.00	
				11/15/2011	M21	1997 PPM					
				11/15/2011	M21	60.67 PPM					
				11/15/2011	VIS	P					11/15/2011
5217	VALVE	6.00	SOUTH EAST SIDE OF TK108	11/04/2011	VIS	F	VLV-PKG				
				11/04/2011	M21	1488 PPM					
				11/04/2011	M21	0 PPM		11/07/2011	VLV-TP	203.00	
				11/07/2011	M21	203 PPM					
				11/07/2011	VIS	P					11/07/2011
5244	VALVE/ WTR DRW	6.00	SOUTH WEST SIDE OF TK109	11/15/2011	VIS	F	WTR DRW CA	11/15/2011	VLV-CL	4954.00	
				11/15/2011	M21	4954 PPM					
				11/15/2011	M21	1439 PPM		11/16/2011	VLV-TCA P	0.00	
				11/16/2011	VIS	P					
				11/16/2011	M21	101 PPM					11/16/2011
5261	VALVE	6.00	EAST SIDE OF TK109 @ CATWALK	11/04/2011	VIS	F					
				11/04/2011	M21	3297 PPM		11/07/2011	VLV-TP	0.00	
				11/07/2011	VIS	P					
				11/07/2011	M21	201 PPM					11/07/2011
5365	VALVE	6.00	SOUTH OF TK113	10/24/2011	M21	2198 PPM	WTR DRW CA	10/24/2011	VLV-TBO N	795.00	
				10/24/2011	M21	795 PPM		10/25/2011	VLV-TCA P	113.00	

## LEAKING EQUIPMENT LOG

Reporting Period 10/01/2011 - 12/31/2011

## Process Unit : 34

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
				10/25/2011	M21	113 PPM					
				10/25/2011	VIS	P					10/25/2011
5825	VALVE/ WTR DRW	6.00	SOUTH EAST SIDE OF TK129 BETWEEN TANK & CATWALK								
				10/25/2011	M21	702 PPM	WTR DRW CA	10/25/2011	ATTB	602.00	
				10/25/2011	M21	602 PPM		10/26/2011	VLV-TCA P	6.00	
				10/26/2011	M21	6 PPM					10/26/2011
5868	VALVE	6.00	NORTH EAST SIDE OF TK128 NEAR STAIRS								
				10/25/2011	M21	4701 PPM	WTR DRW CA	10/25/2011	ATTB	3664.00	
				10/25/2011	M21	3664 PPM					
				11/04/2011	VIS	P					
				11/04/2011	M21	116 PPM					11/04/2011

## Process Unit 34 Summary

	Component Count	Leak Count
Total in Group	7	7
Total Valves	7	7
Total Pumps	0	0
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0

**Process Unit : TERM**

Tag Number	Part / Type	Size	Location	Monitor Date	Test Method	PPM Reading	Part Leaking	Repair Date	Repair Method	Remonitor Reading	Date Completed
30551	PUMP/ CENTRIF	0.00	PUMP AT AA-10 -2 TERM								
				12/13/2011	VIS	F	PMP-SEAL	12/13/2011	PMP-WS E	1460.00	
				12/13/2011	M21	1460 PPM					
				12/13/2011	M21	1506 PPM					
				12/20/2011	VIS	P		12/22/2011	PMP-WS E	0.00	
				12/22/2011	VIS	P					
				12/22/2011	M21	87 PPM					12/22/2011

**Process Unit TERM Summary**

	Component Count	Leak Count
Total in Group	1	1
Total Valves	0	0
Total Pumps	1	1
Total Compressors	0	0
Total Relief Valves	0	0
Total Connectors	0	0
Total Agitators	0	0
Total Other Equipment	0	0



**Table 9**  
**Michigan Refining Division**  
**Fourth Quarter End of Line Calculations**

Q4 2011		S1	S2	S3a	S3b	S7	S4	S5	S6	Monthly Total (kg)
		Sand Filter Effluent	29T40/41	Centrifuge Solids	29T12	29T47	Vacuum Truck	Miscellaneous	Spent Caustic	
October-11	Individual Sample Results (ppm)	0.00	95.33	—	2.50	193.33				
		0.00	89.67	11.30	2.50	68.27				
		0.00	65.67	0.25	2.50	72.00				
		0.021	91.00	0.36	2.50	32.67				
		0.007	85.42	3.97	2.50	91.57				
	Average Sample Results (ppm)									
	Waste Volume (gallons/month)	44,787,312	0	216,940	24,000	36,205				
	Waste Amount (kg)	169,784,628	0	98,609	65,416	137,250				
November-11	Individual Sample Results (ppm)	0.00	82.00	0.57	2.50	32.33				
		0.025	83.00	0.82	1.00	22.33				
		0.04	86.33	51.33	2.50	20.33				
		0.02	76.67	43.67	2.50	13.67				
		0.02	36.00	0.05	2.50	2.50				
	Average Sample Results (ppm)	0.02	72.80	19.29	2.20	18.23				
	Waste Volume (gallons/month)	159,135,840	0	163,600	24,000	12,406				
	Waste Amount (kg)	603,269,503	0	74,364	65,416	47,030				
December-11	Individual Sample Results (ppm)	0.017	156.67	0.42	2.50	16.00				
		0.065	60.67	0.20	2.50	12.00				
		0.034	340.00	0.25	1.00	9.45				
		0.001	105.67	0.25	2.50	—				
		0.03	165.75	0.28	2.13	12.48				
	Average Sample Results (ppm)									
	Waste Volume (gallons/month)	83,351,809	0	90,540	0	27,653				
	Waste Amount (kg)	315,979,127	0	41,155	0	104,830				
Monthly EOL Benzene Quantity (kg)*		9.25	0.00	0.01	0.00	1.31	133.35	45.71	0.00	189.63

\*For non-detect results, 1/2 the detection limit is used in the calculated quantity.

Quarterly Benzene totals (kg):	22.99	0.00	1.84	0.31	14.73	219.42	45.72	0.28	305.28
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Fourth Quarter EOL Benzene Quantity (Mg):	0.30528	Fourth Quarter EOL Benzene Quantity (Kg):	305.28
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**Table 10**  
**BWON Inspections - Fourth Quarter 2011**  
**Michigan Refining Division**

Complex	Unit	Date	Service/Description	First Attempt	Recommended Fix	Final repair	Final Repair Date
3/4	N/A	10/24/2011	BWON Used/Slop Oil Drum M-2	Latch Lid	Latch Lid	Lid Latched	10/24/2011
2	8	10/26/2011	BWON Used/Slop Oil Drum 2-5	Latch Lid	Latch Lid	Lid Latched	10/26/2011
3/4	N/A	10/27/2011	BWON Used/Slop Oil Drum M-2	Latch Lid	Latch Lid	Lid Latched	10/27/2011
1	5	10/27/2011	BWON Used/Slop Oil Drum 1-1	Latch Lid	Latch Lid	Lid Latched	10/27/2011
1	5	10/27/2011	BWON Used/Slop Oil Drum 1-6	Latch Lid	Latch Lid	Lid Latched	10/27/2011
N/A	N/A	10/27/2011	BWON Used Slop Oil Drum W-1	Latch Lid	Latch Lid	Lid Latched	10/27/2011
3/4	N/A	10/27/2011	BWON Used/Slop Oil Drum M-1	Latch Lid	Latch Lid	Lid Latched	10/27/2011
4	N/A	11/23/2011	BWON Used/Slop Oil Drum 4-1	Latch Lid	Install New Lid	New Lid Installed	11/28/2011
2	8	11/30/2011	BWON Used/Slop Oil Drum 2-1	Latch Lid	Latch Lid	Lid Latched	11/30/2011
2	8	11/30/2011	BWON Used/Slop Oil Drum 2-3	Latch Lid	Latch Lid	Lid Latched	11/30/2011
N/A	N/A	11/30/2011	BWON Used/Slop Oil Drum W-1	Latch Lid	Latch Lid	Lid Latched	11/30/2011
3/4	N/A	11/30/2011	BWON Used/Slop Oil Drum M-1	Latch Lid	Latch Lid	Lid Latched	11/30/2011
1	5	12/15/2011	BWON Used/Slop Oil Drum 1-1	Latch Lid	Latch Lid	Lid Latched	12/15/2011
1	5	12/15/2011	BWON Used/Slop Oil Drum 1-6	Latch Lid	Latch Lid	Lid Latched	12/15/2011
1	5	12/15/2011	BWON Used/Slop Oil Drum 1-3	Latch Lid	Latch Lid	Lid Latched	12/15/2011
3/4	N/A	12/16/2011	BWON Used/Slop Oil Drum M-1	Latch Lid	Latch Lid	Lid Latched	12/16/2011
3/4	N/A	12/16/2011	BWON Used/Slop Oil Drum M-2	Latch Lid	Latch Lid	Lid Latched	12/16/2011
2	8	12/29/2011	BWON Used/Slop Oil Drum 2-5	Latch Lid	Latch Lid	Lid Latched	12/29/2011

MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT  
AIR QUALITY DIVISION

**RENEWABLE OPERATING PERMIT  
REPORT CERTIFICATION**

*Authorized by 1994 P.A. 451, as amended. Failure to provide this information may result in civil and/or criminal penalties.*

Reports submitted pursuant to R 336.1213 (Rule 213), subrules (3)(c) and/or (4)(c), of Michigan's Renewable Operating Permit (ROP) program must be certified by a responsible official. Additional information regarding the reports and documentation listed below must be kept on file for at least 5 years, as specified in Rule 213(3)(b)(ii), and be made available to the Department of Natural Resources and Environment, Air Quality Division upon request.

Source Name Marathon Petroleum Company LP County Wayne

Source Address 1300 South Fort Street City Detroit

AQD Source ID (SRN) A9831 ROP No. 199700013c ROP Section No. 01

Please check the appropriate box(es):

☐ **Annual Compliance Certification (Pursuant to Rule 213(4)(c))**

Reporting period (provide inclusive dates): From \_\_\_\_\_ To \_\_\_\_\_

- ☐ 1. During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the ROP.
- ☐ 2. During the entire reporting period this source was in compliance with all terms and conditions contained in the ROP, each term and condition of which is identified and included by this reference, **EXCEPT** for the deviations identified on the enclosed deviation report(s). The method used to determine compliance for each term and condition is the method specified in the ROP, unless otherwise indicated and described on the enclosed deviation report(s).

☐ **Semi-Annual (or More Frequent) Report Certification (Pursuant to Rule 213(3)(c))**

Reporting period (provide inclusive dates): From \_\_\_\_\_ To \_\_\_\_\_

- ☐ 1. During the entire reporting period, **ALL** monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred.
- ☐ 2. During the entire reporting period, all monitoring and associated recordkeeping requirements in the ROP were met and no deviations from these requirements or any other terms or conditions occurred, **EXCEPT** for the deviations identified on the enclosed deviation report(s).

☒ **Other Report Certification**

Reporting period (provide inclusive dates): From 10/1/2011 To 12/31/2011

Additional monitoring reports or other applicable documents required by the ROP are attached as described:

Fourth Quarter Leak Detection and Repair, Benzene Waste NESHA and QQQ Report

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this report and the supporting enclosures are true, accurate and complete

C.T. Case

MPC Investment LLC,  
its General Partner  
Deputy Assistant Secretary

(313) 843-9100

Name of Responsible Official (print or type)

Title

Phone Number

Signature of Responsible Official

Date

\* Photocopy this form as needed.

EQP 5736 (Rev 2-10)